# 2021 Midwest Microbial Pathogenesis Conference

Hosted by Michigan State University

### Friday, September 17, 2021

12 p.m.	Registration is open from 12 - 7 p.m. Located at: 567 Wilson Rd, East Lansing, MI 48824	Biomedical and Physical Science (BPS) West Lawn
4 p.m.	<ul> <li>Welcome Reception with Strolling Dinner and Yard Games</li> <li>Bring your posters for set up</li> </ul>	BPS West Lawn
6:45 p.m.	<ul> <li>Session 1 - Opening Session <ul> <li>Welcome</li> <li>Neal Hammer and Chris Waters, Michigan State University</li> </ul> </li> <li>Intravital microscopy reveals the importance of spirochetal motility and mechanisms of immune evasion in the development of Lyme disease <ul> <li>Mark Wooten, University of Toledo</li> </ul> </li> <li>Pushing the Envelope: Virulence Functions of Francisella tularensis Hypothetical Proteins <ul> <li>Jason Huntley, University of Toledo</li> </ul> </li> </ul>	Primary Speaker Space CEM - 138 Additional Presentation Viewing BPS - 1410 BPS - 1415
8 p.m.	<ul> <li>Session 2 - Current Perspectives On Fungal Pathogens</li> <li>The mechanism and dynamics of acquired of antifungal drug resistance in <i>Candida</i> species <ul> <li>Anna Selmecki, University of Minnesota</li> </ul> </li> <li>Genetic Approaches for Understanding Fungal Pathogenesis: Harnessing the Awesome Power of Yeast Genetics <ul> <li>Teresa O'Meara, University of Michigan</li> </ul> </li> <li>Fungal-Bacterial Interactions in Non-healing Wounds <ul> <li>Lindsay Kalan, University of Wisconsin –Madison</li> </ul> </li> <li>A New Genetic Toolset Reveals Regulators of <i>Candida auris</i> Morphogenesis <ul> <li>Darian Santana, University of Michigan</li> </ul> </li> </ul>	Primary Speaker Space CEM - 138 Additional Presentation Viewing BPS - 1410 BPS - 1415
9:15 p.m.	<ul><li>Concluding Remarks</li><li>Neal Hammer and Chris Waters, Michigan State University</li></ul>	Primary Speaker Space CEM - 138
		Additional Presentation Viewing BPS - 1410 BPS - 1415

### Virtual Program Information - Live On September 16, 2021

Please follow email instructions to access MMPC Swoogo site for complete access to program details, poster abstracts and zoom information. Click here to visit the Swoogo Site: <u>https://msu.swoogo.com/mmpc</u>

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Saturday, September 18, 2021			
7 a.m.	Registration (open from 7 a.m 6 p.m.) Located at: 567 Wilson Rd, East Lansing, MI 48824	BPS Atrium	
7 a.m.	Breakfast	BPS West Lawn	
8:30 a.m.	<ul> <li>Session 3 - Host-Pathogen Host-Microbiome Interactions <ul> <li>A multipurpose ribosome hibernation factor in <i>Staphylococcus aureus</i></li> <li>Mee-Ngan F Yap, Northwestern University</li> </ul> </li> <li><i>Pseudomonas aeruginosa</i> CdiA contributes to interbacterial antagonism and virulence <ul> <li>Jonathan Allen, Loyola University Chicago</li> </ul> </li> <li>The role of ISGylation in pathogen spread <ul> <li>Lilly Radoshevich, University of Iowa</li> </ul> </li> <li><i>Helicobacter pylori</i> activates STING signaling via cag type IV secretion system activity <ul> <li>Cecily Wood, University of Kentucky</li> </ul> </li> </ul>	Primary Speaker Space CEM - 138 Additional Presentation Viewing BPS - 1410 BPS - 1415	
9:45 a.m.	Coffee Break Sparty's Café also open for personal purchases	BPS Atrium Near CEM 138	
10 a.m.	<ul> <li>Session 4 - Gene Regulation and New Models of Pathogenesis</li> <li>Where am I and what should I do? Insights on how the Lyme disease spirochete regulates production of virulence proteins <ul> <li>Brian Stevenson, University of Kentucky</li> </ul> </li> <li>Modulating flagella-mediated motility in Salmonella <ul> <li>Johanna Elfenbein, University of Wisconsin—Madison</li> </ul> </li> <li>Mechanisms of <i>Mycobacterium tuberculosis</i> pathogenesis <ul> <li>Christina Stallings, Washington University in St. Louis</li> </ul> </li> <li>Temperature influences the composition and cytotoxicity of extracellular vesicles in <i>Staphylococcus aureus</i> <ul> <li>Paul Briaud, Ohio University</li> </ul> </li> </ul>	Primary Speaker Space CEM - 138 Additional Presentation Viewing BPS - 1410 BPS - 1415	
11:15 a.m.	Lunch	BPS West Lawn	
12:30 p.m.	<ul> <li>COVID Panel</li> <li>Viral Genome Evolution <ul> <li>Vaughn Cooper, University of Pittsburgh</li> </ul> </li> <li>ACE2 Receptor <ul> <li>Bruce Uhal, Michigan State University</li> </ul> </li> <li>Epidemiology <ul> <li>Sandip Shah, Michigan Department of Health and Human Services</li> </ul> </li> </ul>	Primary Speaker Space CEM - 138 Additional Presentation Viewing BPS - 1410 BPS - 1415	

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#### Saturday, September 18, 2021 - Continued **Session 5 - Controlling Bacterial Infections** 1:30 p.m. **Primary Speaker Space** CEM - 138 • Birds of a feather enteritis together: A tale of lorikeets, Clostridium and the gut microbiome Vanessa Hale, Ohio State University Additional Presentation Viewing Impact of psychosocial stress on host-microbe interactions at the mucosal surface BPS - 1410 • BPS - 1415 Michael Bailey, Nationwide Children's Hospital Rewiring the host Hippo signaling pathway during Legionella pneumophila infection Pei-Chung Lee, Wayne State University • Listeria monocytogenes GlmR is an accessory uridyltransferase essential for • cytosolic survival and virulence. Kimberly Gutierrez, University of Wisconsin-Madison 2:45 p.m. Poster Session and Afternoon Networking Reception BPS Atrium's and First Floor See Swoogo for abstracts Hallways 4:45 p.m. Session 6 - Molecular Mechanisms of Pathogenesis Primary Speaker Space Engineered decoy receptors as potent neutralizers of SARS-CoV-2 variants and CEM - 138 • therapeutic candidates for the treatment of COVID • Erik Procko, University of Illinois Additional Presentation Viewing BPS - 1410 Stress response systems in Brucella Sean Crosson, Michigan State University BPS - 1415 Targeting disulfide bond formation in bacteria Cristina Landeta, Indiana University Bloomington Nitric oxide stimulates type IV MSHA pilus retraction in Vibrio cholerae via • activation of the phosphodiesterase CdpA Hannah Hughes, Indiana University Bloomington 6 p.m. **Keynote Address:** Primary Speaker Space CEM - 138 **Quorum Sensing Across Domains: From Viruses To Bacteria To Eukaryotes** Bonnie Bassler, Princeton University • Additional Presentation Viewing 7 p.m. **Concluding Remarks** BPS - 1410 Neal Hammer, Michigan State University BPS - 1415 Chris Waters, Michigan State University

7:15 p.m. Dinner on Your Own and Planning Committee Meeting

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# 2021 Midwest Microbial Pathogenesis Conference

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