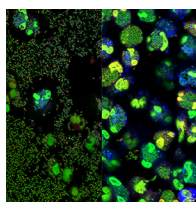




CONTENTS • NOVEMBER 2020 • VOLUME 88, NO. 11

COVER IMAGE



Cover photograph: *Staphylococcus aureus* biofilms require Panton-Valentine leucocidin (PVL), LukAB, and HlgAB to survive neutrophil-mediated killing. The left panel shows wild-type USA300 *S. aureus* biofilm incubated with primary human neutrophils for 1 h, stained with Cell Tracker Blue (cytosol; blue), ethidium homodimer (DNA of dead/dying neutrophils; red), and Syto-9 (live cells; green). The right panel shows a similar experiment performed with neutrophils and an isogenic *S. aureus* mutant lacking three toxins, namely, Panton-Valentine leucocidin (PVL/LukSF), LukAB, and gamma hemolysin AB ( $\Delta lukSF \Delta lukAB \Delta hlgAB$ ). PVL and HlgAB induce the formation of neutrophil extracellular traps that are unsuccessful at clearing wild-type biofilms. LukAB is required for bacteria to escape phagocytosis-

dependent killing. (See related article in October 2020, vol. 88, e00372-20.) (Copyright © 2020 American Society for Microbiology. All Rights Reserved.)

SPOTLIGHT

Article of Significant Interest in This Issue e00570-20

MOLECULAR PATHOGENESIS

Single Amino Acid Replacements in RocA Disrupt Protein-Protein Interactions To Alter the Molecular Pathogenesis of Group A *Streptococcus* e00386-20

Paul E. Bernard, Amey Duarte, Mikhail Bogdanov, James M. Musser, Randall J. Olsen

The Twin-Arginine Translocation System Is Important for Stress Resistance and Virulence of *Brucella melitensis* e00389-20

Xin Yan, Sen Hu, Yan Yang, Da Xu, Huoming Li, Wenxing Liu, Xijun He, Ganwu Li, Wentong Cai, Zhigao Bu

CELLULAR MICROBIOLOGY: PATHOGEN-HOST CELL MOLECULAR INTERACTIONS

*Coxiella burnetii*-Infected NK Cells Release Infectious Bacteria by Degranulation e00172-20

Svea Matthiesen, Luca Zaack, Kati Franzke, Rico Jahnke, Charlie Fricke, Michael Mauermeir, Stefan Finke, Anja Lührmann, Michael R. Knittler

Dual Host-Intracellular Parasite Transcriptome of Eucleated Cells Hosting *Leishmania amazonensis*: Control of Half-Life of Host Cell Transcripts by the Parasite e00261-20

Cristina M. Orikaza, Carina C. Pessoa, Fernanda V. Paladino, Pilar T. V. Florentino, Clara L. Barbiéri, Hiro Goto, Eduardo Milton Ramos-Sanchez, José Franco da Silveira, Michel Rabinovitch, Renato A. Mortara, Fernando Real

Distinct *Mycoplasma pneumoniae* Interactions with Sulfated and Sialylated Receptors e00392-20

Caitlin R. Williams, Li Chen, Edward S. Sheppard, Pradeep Chopra, Jason Locklin, Geert-Jan Boons, Duncan C. Krause

Cigarette Smoke Exposure Promotes Virulence of *Pseudomonas aeruginosa* and Induces Resistance to Neutrophil Killing e00527-20

Jason Chien, John H. Hwang, Sedtavut Nilaad, Jorge A. Masso-Silva, Sae Jeong Ahn, Elisa K. McEachern, Alexander Moshensky, Min-Kwang Byun, Laura E. Crotty Alexander

Coinfection with Porcine Circovirus Type 2 (PCV2) and *Streptococcus suis* Serotype 2 (SS2) Enhances the Survival of SS2 in Swine Tracheal Epithelial Cells by Decreasing Reactive Oxygen Species Production e00537-20

Qing Wang, Hong Zhou, Hongjie Fan, Xiaomin Wang

**BACTERIAL INFECTIONS**

- Animal Model To Study *Klebsiella pneumoniae* Gastrointestinal Colonization and Host-to-Host Transmission** e00071-20  
*Taylor M. Young, Andrew S. Bray, Ravinder K. Nagpal, David L. Caudell, Hariom Yadav, M. Ammar Zafar*
- Effects of Immunomodulatory Drug Fingolimod (FTY720) on *Chlamydia* Dissemination and Pathogenesis** e00281-20  
*Zengzi Zhou, Lingxiang Xie, Luying Wang, Min Xue, Dabao Xu, Guangming Zhong*
- Three-Dimensional *In Vitro Staphylococcus aureus* Abscess Communities Display Antibiotic Tolerance and Protection from Neutrophil Clearance** e00293-20  
*Marloes I. Hofstee, Martijn Riool, Igors Terjajevs, Keith Thompson, Martin J. Stoddart, R. Geoff Richards, Sebastian A. J. Zaat, T. Fintan Moriarty*
- Clarithromycin Exerts an Antibiofilm Effect against *Salmonella enterica* Serovar Typhimurium rdar Biofilm Formation and Transforms the Physiology towards an Apparent Oxygen-Depleted Energy and Carbon Metabolism** e00510-20  
*Munirah Zafar, Humera Jahan, Sulman Shafeeq, Manfred Nimtz, Lothar Jänsch, Ute Römling, M. Iqbal Choudhary*

**HOST RESPONSE AND INFLAMMATION**

- Regulatory T Cells Contribute to Resistance against Lyme Arthritis** e00160-20  
*Emily M. Siebers, Elizabeth S. Liedhegner, Michael W. Lawlor, Ronald F. Schell, Dean T. Nardelli*
- Enterococcus faecalis* Induces Differentiation of Immune-Aberrant Dendritic Cells from Murine Bone Marrow-Derived Stem Cells** e00338-20  
*Mohamed Mohamed Elashiry, Mahmoud Elashiry, Rana Zeitoun, Ranya Elsayed, Fucong Tian, Shehab Eldin Saber, Salma Hasan Elashry, Franklin R. Tay, Christopher W. Cutler*

**FUNGAL AND PARASITIC INFECTIONS**

- Limited Role of Mincle in the Host Defense against Infection with *Cryptococcus deneoformans*** e00400-20  
*Yuki Sato, Ko Sato, Hideki Yamamoto, Jun Kasamatsu, Tomomitsu Miyasaka, Daiki Tanno, Anna Miyahara, Takafumi Kagesawa, Akiho Oniyama, Kotone Kawamura, Rin Yokoyama, Yuki Kitai, Aya Umeki, Shigenari Ishizuka, Kazuki Takano, Ryuhei Shiroma, Nana Nakahata, Kaori Kawakami, Emi Kanno, Hiromasa Tanno, Sho Yamasaki, Hiromitsu Hara, Keiko Ishii, Kazuyoshi Kawakami*

**MICROBIAL IMMUNITY AND VACCINES**

- Cross-Reactivity, Epitope Mapping, and Potency of Monoclonal Antibodies to Class 5 Fimbrial Tip Adhesins of Enterotoxigenic *Escherichia coli*** e00246-20  
*Yang Liu, Sakina Shahabudin, Sami Farid, Lanfong H. Lee, Annette L. McVeigh, Milton Maciel, Jr., Steven T. Poole, Matthew Broadman, Michael G. Prouty, Stephen J. Savarino*
- Evaluation of the Immunogenicity and Protective Efficacy of an Enterotoxigenic *Escherichia coli* CFA/I Adhesin–Heat-Labile Toxin Chimera** e00252-20  
*Aisling O'Dowd, Milton Maciel, Jr., Steven T. Poole, Michael G. Jobling, Julianne E. Rollenhagen, Colleen M. Woods, Stephanie A. Sincock, Annette L. McVeigh, Michael J. Gregory, Ryan C. Maves, Michael G. Prouty, Randall K. Holmes, Stephen J. Savarino*