

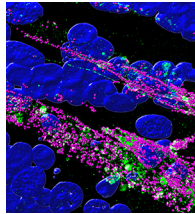


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## CONTENTS • AUGUST 2020 • VOLUME 94, NO. 16

### COVER IMAGE



*Cover photograph:* Progeny varicella-zoster virus particles that are transported to the plasma membrane align themselves along viral highways. These highways were probed with antibodies to the major viral glycoprotein gE and the mannose-6-phosphate receptor. After analysis by confocal microscopy together with Imaris 3/4D Image Visualization and Analysis software and its Spots module, there was evidence for colocalization of varicella gE with the mannose-6-phosphate receptor in the viral highways (magenta-colored spots). Nuclei within an underlying virus-induced syncytium were colored blue. Immunolabeled proteins within the infected monolayer that did not colocalize were removed from the image by the Imaris software. (See related article at e00800-20). (Copyright © 2020 Girsch et al. CC-BY 4.0.)

### SPOTLIGHT

#### Articles of Significant Interest in This Issue

e01227-20

#### GENOME REPLICATION AND REGULATION OF VIRAL GENE EXPRESSION

##### **Porcine Epidemic Diarrhea Virus Deficient in RNA Cap Guanine-N-7 Methylation Is Attenuated and Induces Higher Type I and III Interferon Responses**

e00447-20

*Yunjian Lu, Hui Cai, Mijia Lu, Yuanmei Ma, Anzhong Li, Youling Gao, Jiyong Zhou, Howard Gu, Jianrong Li, Jinyan Gu*

##### **An Extended Primer Grip of Picornavirus Polymerase Facilitates Sexual RNA Replication Mechanisms**

e00835-20

*Brian J. Kempf, Colleen L. Watkins, Olve B. Peersen, David J. Barton*

##### **cis-Acting Sequences and Secondary Structures in Untranslated Regions of Duck Tembusu Virus RNA Are Important for Cap-Independent Translation and Viral Proliferation**

e00906-20

*Tao Wang, Andres Merits, Yuanyuan Wu, Mingshu Wang, Renyong Jia, Dekang Zhu, Mafeng Liu, Xinxin Zhao, Qiao Yang, Ying Wu, Shaqiu Zhang, Yunya Liu, Ling Zhang, Yanling Yu, Leichang Pan, Shun Chen, Anchun Cheng*

##### **Ebola Virus Inclusion Body Formation and RNA Synthesis Are Controlled by a Novel Domain of Nucleoprotein Interacting with VP35**

e02100-19

*Tsuyoshi Miyake, Charlotte M. Farley, Benjamin E. Neubauer, Thomas P. Beddow, Thomas Hoenen, Daniel A. Engel*

#### GENETIC DIVERSITY AND EVOLUTION

##### **Host-Virus Arms Races Drive Elevated Adaptive Evolution in Viral Receptors**

e00684-20

*Wenqiang Wang, Huayao Zhao, Guan-Zhu Han*

#### VIRUS-CELL INTERACTIONS

##### **Human Cytomegalovirus Glycoprotein-Initiated Signaling Mediates the Aberrant Activation of Akt**

e00167-20

*Jamil Mahmud, Michael J. Miller, Aaron M. Altman, Gary C. Chan,*

##### **Cellular Vimentin Interacts with Foot-and-Mouth Disease Virus Nonstructural Protein 3A and Negatively Modulates Viral Replication**

e00273-20

*Xueqing Ma, Ying Ling, Pinghua Li, Pu Sun, Yimei Cao, Xingwen Bai, Kun Li, Yuanfang Fu, Jing Zhang, Dong Li, Huifang Bao, Yingli Chen, Zhiyong Li, Yonggang Wang, Zengjun Lu, Zaixin Liu*

<b>Differential Pressures of SERINC5 and IFITM3 on HIV-1 Envelope Glycoprotein over the Course of HIV-1 Infection</b>	<b>e00514-20</b>
<i>Saina Beitari, Qinghua Pan, Andrés Finzi, Chen Liang</i>	
<b>Human Papillomavirus 31 Tyrosine 102 Regulates Interaction with E2 Binding Partners and Episomal Maintenance</b>	<b>e00590-20</b>
<i>Timra Gilson, Sara Culleton, Fang Xie, Marsha DeSmet, Elliot J. Androphy</i>	
<b>Human Cytomegalovirus Utilizes Extracellular Vesicles To Enhance Virus Spread</b>	<b>e00609-20</b>
<i>Nicholas T. Streck, Yuanjun Zhao, Jeffrey M. Sundstrom, Nicholas J. Buchkovich</i>	
<b>Exocytosis of Progeny Infectious Varicella-Zoster Virus Particles via a Mannose-6-Phosphate Receptor Pathway without Xenophagy following Secondary Envelopment</b>	<b>e00800-20</b>
<i>James H. Girsch, Wallen Jackson, John E. Carpenter, Thomas O. Moninger, Keith W. Jarosinski, Charles Grose</i>	
<b>ORF4 of the Temperate Archaeal Virus SNJ1 Governs the Lysis-Lysogeny Switch and Superinfection Immunity</b>	<b>e00841-20</b>
<i>Beibei Chen, Zhao Chen, Yuchen Wang, Han Gong, Linshan Sima, Jiao Wang, Shushan Ouyang, Wenqiang Gan, Mart Krupovic, Xiangdong Chen, Shishen Du</i>	
<b>An Alternatively Spliced Sirtuin 2 Isoform 5 Inhibits Hepatitis B Virus Replication from cccDNA by Repressing Epigenetic Modifications Made by Histone Lysine Methyltransferases</b>	<b>e00926-20</b>
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<b>Patterns of Herpes Simplex Virus 1 Infection in Neural Progenitor Cells</b>	<b>e00994-20</b>
<i>Wenxiao Zheng, Alissa M. Klammer, Jennifer N. Naciri, Jason Yeung, Matthew Demers, Jadranka Milosevic, Paul R. Kinchington, David C. Bloom, Vishwajit L. Nimgaonkar, Leonardo D'Aiuto</i>	
<b>Filoviruses Use the HOPS Complex and UVRAG To Traffic to Niemann-Pick C1 Compartments during Viral Entry</b>	<b>e01002-20</b>
<i>Yuxia Bo, Shirley Qiu, Rory P. Mulloy, Marceline Côté</i>	
<b>CELLULAR RESPONSE TO INFECTION</b>	
<b>Butyrate Reprograms Expression of Specific Interferon-Stimulated Genes</b>	<b>e00326-20</b>
<i>Mahesh Chemudupati, Adam D. Kenney, Anna C. Smith, Robert J. Fillinger, Lizhi Zhang, Ashley Zani, Shan-Lu Liu, Matthew Z. Anderson, Amit Sharma, Jacob S. Yount</i>	
<b>VACCINES AND ANTIVIRAL AGENTS</b>	
<b>Enhancing Neuraminidase Immunogenicity of Influenza A Viruses by Rewiring RNA Packaging Signals</b>	<b>e00742-20</b>
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- Seminal Plasma-Derived Extracellular-Vesicle Fractions from HIV-Infected Men Exhibit Unique MicroRNA Signatures and Induce a Proinflammatory Response in Cells Isolated from the Female Reproductive Tract** e00525-20  
*Erika G. Marques de Menezes, Karen Jang, Ashley F. George, Mette Nyegaard, Jason Neidleman, Heather C. Inglis, Ali Danesh, Xutao Deng, Amirali Afshari, Young H. Kim, Jean-Noël Billaud, Kara Marson, Christopher D. Pilcher, Satish K. Pillai, Philip J. Norris, Nadia R. Roan*
- Restoring Herpesvirus Entry Mediator (HVEM) Immune Function in HVEM<sup>-/-</sup> Mice Rescues Herpes Simplex Virus 1 Latency and Reactivation Independently of Binding to Glycoprotein D** e00700-20  
*Kati Tormanen, Shaohui Wang, Ujjaldeep Jaggi, Homayon Ghiasi*
- Better Viral Control despite Higher CD4<sup>+</sup> T Cell Activation during Acute HIV-1 Infection in Zambian Women Is Linked to the Sex Hormone Estradiol** e00758-20  
*Elina El-Badry, Gladys Macharia, Daniel Claiborne, Kelsie Brooks, Darío A. Dilernia, Paul Goepfert, William Kilembe, Susan Allen, Jill Gilmour, Eric Hunter*
- Aerosol Transmission from Infected Swine to Ferrets of an H3N2 Virus Collected from an Agricultural Fair and Associated with Human Variant Infections** e01009-20  
*Bryan S. Kaplan, J. Brian Kimble, Jennifer Chang, Tavis K. Anderson, Phillip C. Gauger, Alicia Janas-Martindale, Mary Lea Killian, Andrew S. Bowman, Amy L. Vincent*