

SPOTLIGHT

Articles of Significant Interest Selected from This Issue by the Editors 13279

STRUCTURE AND ASSEMBLY

<p>Identification of Functional Domains within the Essential Large Tegument Protein pUL36 of Pseudorabies Virus</p>	<p>Sindy Böttcher, Harald Granzow, Christina Maresch, Britta Möhl, Barbara G. Klupp, and Thomas C. Mettenleiter</p>	<p>13403–13411</p>
<p>Ubiquitin Depletion and Dominant-Negative VPS4 Inhibit Rhabdovirus Budding without Affecting Alphavirus Budding</p>	<p>Gwen M. Taylor, Phyllis I. Hanson, and Margaret Kielian</p>	<p>13631–13639</p>
<p>Contribution of Endocytic Motifs in the Cytoplasmic Tail of Herpes Simplex Virus Type 1 Glycoprotein B to Virus Replication and Cell-Cell Fusion</p>	<p>Igor Beitia Ortiz de Zarate, Lilia Cantero-Aguilar, Magalie Longo, Clarisse Berlioz-Torrent, and Flore Rozenberg</p>	<p>13889–13903</p>

GENOME REPLICATION AND REGULATION OF VIRAL GENE EXPRESSION

<p>Promoter- and Cell-Specific Transcriptional Transactivation by the Kaposi's Sarcoma-Associated Herpesvirus ORF57/ Mta Protein</p>	<p>Diana Palmeri, Sophia Spadavecchia, Kyla Driscoll Carroll, and David M. Lukac</p>	<p>13299–13314</p>
<p>Chaperones Activate Hepadnavirus Reverse Transcriptase by Transiently Exposing a C-Proximal Region in the Terminal Protein Domain That Contributes to ϵ RNA Binding</p>	<p>Michael Stahl, Jürgen Beck, and Michael Nassal</p>	<p>13354–13364</p>
<p>Interaction of Vesicular Stomatitis Virus P and N Proteins: Identification of Two Overlapping Domains at the N Terminus of P That Are Involved in N⁰-P Complex Formation and Encapsidation of Viral Genome RNA</p>	<p>Mingzhou Chen, Tomoaki Ogino, and Amiya K. Banerjee</p>	<p>13478–13485</p>
<p>Overexpression of the Kaposi's Sarcoma-Associated Herpesvirus Transactivator K-Rta Can Complement a K-bZIP Deletion BACmid and Yields an Enhanced Growth Phenotype</p>	<p>Taeko Kato-Noah, Yiyang Xu, Cyprian C. Rossetto, Kelly Colletti, Iva Papoušková, and Gregory S. Pari,</p>	<p>13519–13532</p>
<p>Plasma Cell-Specific Transcription Factor XBP-1s Binds to and Transactivates the Epstein-Barr Virus BZLF1 Promoter</p>	<p>Chia Chi Sun and David A. Thorley-Lawson</p>	<p>13566–13577</p>
<p>X Box Binding Protein XBP-1s Transactivates the Kaposi's Sarcoma-Associated Herpesvirus (KSHV) ORF50 Promoter, Linking Plasma Cell Differentiation to KSHV Reactivation from Latency</p>	<p>Sam J. Wilson, Edward H. Tsao, Benjamin L. J. Webb, Hongtao Ye, Lucy Dalton-Griffin, Christoforos Tsantoulas, Catherine V. Gale, Ming-Qing Du, Adrian Whitehouse, and Paul Kellam</p>	<p>13578–13586</p>
<p>Biochemical and Genetic Analyses of Murine Hepatitis Virus Nsp15 Endoribonuclease</p>	<p>Hyojeung Kang, Kanchan Bhardwaj, Yi Li, Satheesh Palaninathan, James Sacchettini, Linda Guarino, Julian L. Leibowitz, and C. Cheng Kao</p>	<p>13587–13597</p>
<p>Direct Interaction between the N- and C-Terminal Portions of the Herpes Simplex Virus Type 1 Origin Binding Protein UL9 Implies the Formation of a Head-to-Tail Dimer</p>	<p>Soma Chattopadhyay and Sandra K. Weller</p>	<p>13659–13667</p>
<p>RNA Binding Domain of Jamestown Canyon Virus S Segment RNAs</p>	<p>Monica M. Ogg and Jean L. Patterson</p>	<p>13754–13760</p>

Discrete Clusters of Virus-Encoded MicroRNAs Are Associated with Complementary Strands of the Genome and the 7.2-Kilobase Stable Intron in Murine Cytomegalovirus	Amy H. Buck, Javier Santoyo-Lopez, Kevin A. Robertson, Diwakar S. Kumar, Martin Reczko, and Peter Ghazal	13761–13770
Mouse Cytomegalovirus MicroRNAs Dominate the Cellular Small RNA Profile during Lytic Infection and Show Features of Posttranscriptional Regulation	Lars Dölken, Jonathan Perot, Valérie Cognat, Abdelmalek Alioua, Matthias John, Jürgen Soutschek, Zsolt Ruzsics, Ulrich Koszinowski, Olivier Voinnet, and Sébastien Pfeffer	13771–13782
De Novo Synthesis of N and P Proteins as a Key Step in Sendai Virus Gene Expression	Marian A. Wiegand, Sascha Bossow, Sabine Schlecht, and Wolfgang J. Neubert	13835–13844
DDX3 DEAD-Box RNA Helicase Is Required for Hepatitis C Virus RNA Replication	Yasuo Ariumi, Misao Kuroki, Ken-ichi Abe, Hiromichi Dansako, Masanori Ikeda, Takaji Wakita, and Nobuyuki Kato	13922–13926
GENETIC DIVERSITY AND EVOLUTION		
A Novel Virus Detected in Papillomas and Carcinomas of the Endangered Western Barred Bandicoot (<i>Perameles bougainville</i>) Exhibits Genomic Features of both the <i>Papillomaviridae</i> and <i>Polyomaviridae</i>	Lucy Woolford, Annabel Rector, Marc Van Ranst, Andrea Ducki, Mark D. Bennett, Philip K. Nicholls, Kristin S. Warren, Ralph A. Swan, Graham E. Wilcox, and Amanda J. O'Hara	13280–13290
Two-Way Antigenic Cross-Reactivity between Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) and Group 1 Animal CoVs Is Mediated through an Antigenic Site in the N-Terminal Region of the SARS-CoV Nucleoprotein	Anastasia N. Vlasova, Xinsheng Zhang, Mustafa Hasoksuz, Hadya S. Nagesha, Lia M. Haynes, Ying Fang, Shan Lu, and Linda J. Saif	13365–13377
Nef-Mediated Enhancement of Virion Infectivity and Stimulation of Viral Replication Are Fundamental Properties of Primate Lentiviruses	Jan Münch, Devi Rajan, Michael Schindler, Anke Specht, Elke Rücker, Francis J. Novembre, Eric Nerrienet, Michaela C. Müller-Trutwin, Martine Peeters, Beatrice H. Hahn, and Frank Kirchhoff	13852–13864
The 29-Nucleotide Deletion Present in Human but Not in Animal Severe Acute Respiratory Syndrome Coronaviruses Disrupts the Functional Expression of Open Reading Frame 8	Monique Oostra, Cornelis A. M. de Haan, and Peter J. M. Rottier	13876–13888
VIRUS-CELL INTERACTIONS		
Proteolysis of the Ebola Virus Glycoproteins Enhances Virus Binding and Infectivity	Rachel L. Kaletsky, Graham Simmons, and Paul Bates	13378–13384
A Novel Zinc-Binding Domain Is Essential for Formation of the Functional Junín Virus Envelope Glycoprotein Complex	Joanne York and Jack H. Nunberg	13385–13391
Herpes Simplex Virus Type 2 Glycoprotein G Is Targeted by the Sulfated Oligo- and Polysaccharide Inhibitors of Virus Attachment to Cells	Beata Adamiak, Maria Ekblad, Tomas Bergström, Vito Ferro, and Edward Trybala	13424–13434
Intracellular Processing, Glycosylation, and Cell Surface Expression of Human Metapneumovirus Attachment Glycoprotein	Li Liu, Nathalie Bastien, and Yan Li	13435–13443

Dendritic Cells Are Less Susceptible to Human Immunodeficiency Virus Type 2 (HIV-2) Infection than to HIV-1 Infection	Melody G. Duvall, Karin Loré, Hetty Blaak, David A. Ambrozak, William C. Adams, Kathlyn Santos, Christof Geldmacher, John R. Mascola, Andrew J. McMichael, Assan Jaye, Hilton C. Whittle, Sarah L. Rowland-Jones, and Richard A. Koup	13486–13498
Human Herpesvirus 6A (HHV-6A) and HHV-6B Alter E2F1/Rb Pathways and E2F1 Localization and Cause Cell Cycle Arrest in Infected T Cells	Guy Mlechkovich and Niza Frenkel	13499–13508
Analysis of Venezuelan Equine Encephalitis Virus Capsid Protein Function in the Inhibition of Cellular Transcription	Natalia Garmashova, Svetlana Atasheva, Wenli Kang, Scott C. Weaver, Elena Frolova, and Ilya Frolov	13552–13565
Identification of Regions and Residues in Feline Junctional Adhesion Molecule Required for Feline Calicivirus Binding and Infection	Robert J. Ossiboff and John S. L. Parker	13608–13621
The Rabies Virus Glycoprotein Receptor p75^{NTR} Is Not Essential for Rabies Virus Infection	Christine Tuffereau, Klaus Schmidt, Christelle Langevin, Florence Lafay, Georg Dechant, and Martin Koltzenburg	13622–13630
Differential Activation of Human Monocyte-Derived and Plasmacytoid Dendritic Cells by West Nile Virus Generated in Different Host Cells	Maria Carlan Silva, Antonieta Guerrero-Plata, Felicia D. Gilfoy, Roberto P. Garofalo, and Peter W. Mason	13640–13648
Inhibition of Alpharetrovirus Replication by a Range of Human APOBEC3 Proteins	Heather L. Wiegand and Bryan R. Cullen	13694–13699
ERK- and JNK-Dependent Signaling Pathways Contribute to <i>Bombyx mori</i> Nucleopolyhedrovirus Infection	Susumu Katsuma, Kazuei Mita, and Toru Shimada	13700–13709
Human Seminal Plasma Abrogates the Capture and Transmission of Human Immunodeficiency Virus Type 1 to CD4⁺ T Cells Mediated by DC-SIGN	Juan Sabatté, Ana Ceballos, Silvina Raiden, Mónica Vermeulen, Karen Nahmod, Julián Maggini, Gabriela Salamone, Horacio Salomón, Sebastian Amigorena, and Jorge Geffner	13723–13734
The Human T-Cell Leukemia Virus Type 1 Tax Oncoprotein Requires the Ubiquitin-Conjugating Enzyme Ubc13 for NF-κB Activation	Noula Shembade, Nicole S. Harhaj, Masahiro Yamamoto, Shizuo Akira, and Edward W. Harhaj	13735–13742
Human Apolipoprotein E Is Required for Infectivity and Production of Hepatitis C Virus in Cell Culture	Kyung-Soo Chang, Jieyun Jiang, Zhaohui Cai, and Guangxiang Luo	13783–13793
Prion Strain- and Species-Dependent Effects of Antiprion Molecules in Primary Neuronal Cultures	Sabrina Cronier, Vincent Beringue, Anne Bellon, Jean-Michel Peyrin, and Hubert Laude	13794–13800
Adhesion Molecule Interactions Facilitate Human Immunodeficiency Virus Type 1-Induced Virological Synapse Formation between T Cells	Clare Jolly, Ivonne Mitar, and Quentin J. Sattentau	13916–13921
CELLULAR RESPONSE TO INFECTION		
Type I Interferon Production during Herpes Simplex Virus Infection Is Controlled by Cell-Type-Specific Viral Recognition through Toll-Like Receptor 9, the Mitochondrial Antiviral Signaling Protein Pathway, and Novel Recognition Systems	Simon B. Rasmussen, Louise N. Sørensen, Lene Malmgaard, Nina Ank, Joel D. Baines, Zhijian J. Chen, and Søren R. Paludan	13315–13324

Enzymatically Active APOBEC3G Is Required for Efficient Inhibition of Human Immunodeficiency Virus Type 1	Eri Miyagi, Sandrine Opi, Hiroaki Takeuchi, Mohammad Khan, Ritu Goila-Gaur, Sandra Kao, and Klaus Strebel	13346–13353
Identification and Functional Analysis of Salmon Annexin 1 Induced by a Virus Infection in a Fish Cell Line	Hyun Jin Hwang, Chang Hoon Moon, Han Geun Kim, Joo Yun Kim, Jung Min Lee, Jeong Woo Park, and Dae Kyun Chung	13816–13824
Antiretroviral Activity and Vif Sensitivity of Rhesus Macaque APOBEC3 Proteins	Cesar A. Virgen and Theodora Hatzioannou	13932–13937
TRANSFORMATION AND ONCOGENESIS		
Human Papillomavirus Type 16 E7 Oncoprotein Associates with the Centrosomal Component γ-Tubulin	Christine L. Nguyen, Catherine Eichwald, Max L. Nibert, and Karl Munger	13533–13543
RNA Editing of the Human Herpesvirus 8 Kaposin Transcript Eliminates Its Transforming Activity and Is Induced during Lytic Replication	Sharon Z. Gandy, Sarah D. Linnstaedt, Sumitra Muralidhar, Kathleen A. Cashman, Leonard J. Rosenthal, and John L. Casey	13544–13551
VACCINES AND ANTIVIRAL AGENTS		
Identification of Novel Antipoxviral Agents: Mitoxantrone Inhibits Vaccinia Virus Replication by Blocking Virion Assembly	Liang Deng, Peihong Dai, Anthony Ciro, Donald F. Smee, Hakim Djaballah, and Stewart Shuman	13392–13402
Increased Immunogenicity of a DNA-Launched Venezuelan Equine Encephalitis Virus-Based Replicon DNA Vaccine	Karl Ljungberg, Alan C. Whitmore, Meagan E. Fluet, Timothy P. Moran, Reed S. Shabman, Martha L. Collier, Annette A. Kraus, Joseph M. Thompson, David C. Montefiori, Clayton Beard, and Robert E. Johnston	13412–13423
Mapping Protease Inhibitor Resistance to Human Immunodeficiency Virus Type 1 Sequence Polymorphisms within Patients	Art F. Y. Poon, Sergei L. Kosakovsky Pond, Douglas D. Richman, and Simon D. W. Frost	13598–13607
Development of a Challenge-Protective Vaccine Concept by Modification of the Viral RNA-Dependent RNA Polymerase of Canine Distemper Virus	D. Silin, O. Lyubomska, M. Ludlow, W. P. Duprex, and B. K. Rima	13649–13658
Venezuelan Equine Encephalitis Virus Replicon Particles Encoding Respiratory Syncytial Virus Surface Glycoproteins Induce Protective Mucosal Responses in Mice and Cotton Rats	Hoyin Mok, Sujin Lee, Thomas J. Utley, Bryan E. Shepherd, Vasilii V. Polosukhin, Martha L. Collier, Nancy L. Davis, Robert E. Johnston, and James E. Crowe, Jr.	13710–13722
Protective Immunity to <i>Pseudomonas aeruginosa</i> Induced with a Capsid-Modified Adenovirus Expressing <i>P. aeruginosa</i> OprF	Stefan Worgall, Anja Krause, JianPing Qiu, Ju Joh, Neil R. Hackett, and Ronald G. Crystal	13801–13808
Targeted Deletion of Regions Rich in Immune-Evasive Genes from the Cytomegalovirus Genome as a Novel Vaccine Strategy	Luka icin-ain, Ivan Bubic, Margit Schnee, Zsolt Ruzsics, Christian Mohr, Stipan Jonjic, and Ulrich H. Koszinowski	13825–13834
Binding Kinetics of Darunavir to Human Immunodeficiency Virus Type 1 Protease Explain the Potent Antiviral Activity and High Genetic Barrier	Inge Dierynck, Mieke De Wit, Emmanuel Gustin, Inge Keuleers, Johan Vandersmissen, Sabine Hallenberger, and Kurt Hertogs	13845–13851

A Protective and Broadly Cross-Neutralizing Epitope of Human Papillomavirus L2	Ratish Gambhira, Balasubramanyam Karanam, Subhashini Jagu, Jeffrey N. Roberts, Christopher B. Buck, Ioannis Bossis, Hannah Alphs, Timothy Culp, Neil D. Christensen, and Richard B. S. Roden	13927–13931
PATHOGENESIS AND IMMUNITY		
Antiviral Antibodies Are Necessary To Prevent Cytotoxic T-Lymphocyte Escape in Mice Infected with a Coronavirus	Noah S. Butler, Ajai A. Dandekar, and Stanley Perlman	13291–13298
Primary Human Splenic Macrophages, but Not T or B Cells, Are the Principal Target Cells for Dengue Virus Infection In Vitro	Shanley Blackley, Zhihua Kou, Huiyuan Chen, Matthew Quinn, Robert C. Rose, Jacob J. Schlesinger, Myra Coppage, and Xia Jin	13325–13334
NSm Protein of Rift Valley Fever Virus Suppresses Virus-Induced Apoptosis	Sungyong Won, Tetsuro Ikegami, C. J. Peters, and Shinji Makino	13335–13345
FoxP3⁺ CD25⁺ CD8⁺ T-Cell Induction during Primary Simian Immunodeficiency Virus Infection in Cynomolgus Macaques Correlates with Low CD4⁺ T-Cell Activation and High Viral Load	Ingrid Karlsson, Benoît Malleret, Patricia Brochard, Benoît Delache, Julien Calvo, Roger Le Grand, and Bruno Vaslin	13444–13455
Dynamics of T-Cell Responses and Memory T Cells during Primary Simian Immunodeficiency Virus Infection in Cynomolgus Macaques	Ingrid Karlsson, Benoît Malleret, Patricia Brochard, Benoît Delache, Julien Calvo, Roger Le Grand, and Bruno Vaslin	13456–13468
Ebola Virus VP24 Proteins Inhibit the Interaction of NPI-1 Subfamily Karyopherin α Proteins with Activated STAT1	St. Patrick Reid, Charalampos Valmas, Osvaldo Martinez, Freddy Mauricio Sanchez, and Christopher F. Basler	13469–13477
The Zinc Finger Antiviral Protein Acts Synergistically with an Interferon-Induced Factor for Maximal Activity against Alphaviruses	Margaret R. MacDonald, Erica S. Machlin, Owen R. Albin, and David E. Levy	13509–13518
Basal Expression Levels of IFNAR and Jak-STAT Components Are Determinants of Cell-Type-Specific Differences in Cardiac Antiviral Responses	Jennifer Zurney, Kristina E. Howard, and Barbara Sherry	13668–13680
Altered Pathogenesis of Porcine Respiratory Coronavirus in Pigs due to Immunosuppressive Effects of Dexamethasone: Implications for Corticosteroid Use in Treatment of Severe Acute Respiratory Syndrome Coronavirus	Kwonil Jung, Konstantin P. Alekseev, Xinxheng Zhang, Doo-Sung Cheon, Anastasia N. Vlasova, and Linda J. Saif	13681–13693
Allogeneic Differences in the Dependence on CD4⁺ T-Cell Help for Virus-Specific CD8⁺ T-Cell Differentiation	Christopher C. Kembal, Eva Szomolanyi-Tsuda, and Aron E. Lukacher	13743–13753
A High Viral Burden Predicts the Loss of CD8 T-Cell Responses Specific for Subdominant Gag Epitopes during Chronic Human Immunodeficiency Virus Infection	Christof Geldmacher, Clive Gray, Martha Nason, Jeffrey R. Currier, Antelmo Haule, Lilian Njovu, Steffen Geis, Oliver Hoffmann, Leonard Maboko, Andreas Meyerhans, Josephine Cox, and Michael Hoelscher	13809–13815
CD4⁺ CCR5⁺ T-Cell Dynamics during Simian Immunodeficiency Virus Infection of Chinese Rhesus Macaques	V. Monceaux, L. Viollet, F. Petit, M. C. Cumont, G. R. Kaufmann, A. M. Aubertin, B. Hurtrel, G. Silvestri, and J. Estaquier	13865–13875

Continued from preceding page

Preserved Central Memory and Activated Effector Memory CD4⁺ T-Cell Subsets in Human Immunodeficiency Virus Controllers: an ANRS EP36 Study	Simon J. Potter, Christine Lacabaratz, Olivier Lambotte, Santiago Perez-Patrigeon, Benoît Vingert, Martine Sinet, Jean-Hervé Colle, Alejandra Urrutia, Daniel Scott-Algara, Faroudy Boufassa, Jean-François Delfraissy, Jacques Thèze, Alain Venet, and Lisa A. Chakrabarti	13904–13915
Addition of Deoxynucleosides Enhances Human Immunodeficiency Virus Type 1 Integration and 2LTR Formation in Resting CD4⁺ T Cells	Gabriela Plesa, Jihong Dai, Cliff Baytop, James L. Riley, Carl H. June, and Una O'Doherty	13938–13942
ERRATA		
Functional Genomic and Serological Analysis of the Protective Immune Response Resulting from Vaccination of Macaques with an NS1-Truncated Influenza Virus	C. R. Baskin, H. Bielefeldt-Ohmann, A. García-Sastre, T. M. Tumpey, N. Van Hoeven, V. S. Carter, M. J. Thomas, S. Proll, A. Solórzano, R. Billharz, J. L. Fornek, S. Thomas, C.-H. Chen, E. A. Clark, Kaja Murali-Krishna, and M. G. Katze	13943
Functional Requirements of the Yellow Fever Virus Capsid Protein	Chinmay G. Patkar, Christopher T. Jones, Yu-hsuan Chang, Ranjit Warriar, and Richard J. Kuhn	13944

Cover photograph (Copyright © 2007, American Society for Microbiology. All Rights Reserved.): Genomic organization of bandicoot papillomatosis carcinomatosis virus type 1 (BPCV1) and image of an adult western barred bandicoot (*Peromyscus bougainville*). BPCV1 exhibits genomic features of both the *Papillomaviridae* and the *Polyomaviridae*. Open reading frames are present on both strands of the genome, with the structural proteins (putative L1 and L2) encoded on one strand and the nonstructural proteins (putative large T antigen and small t antigen) encoded on the other strand. NCR indicates noncoding region. Numbers show the nucleotide positions of start and stop codons. (See related article on page 13280.)