

## TABLE OF CONTENTS

### SPOTLIGHT

Articles of Significant Interest Selected from This Issue by the Editors	3959
--------------------------------------------------------------------------	------

### MINIREVIEW

No Holes Barred: Invasion of the Intestinal Mucosa by <i>Mycobacterium avium</i> subsp. <i>paratuberculosis</i>	John P. Bannantine, Luiz E. Bermudez	3960–3965
-----------------------------------------------------------------------------------------------------------------	--------------------------------------	-----------

### MOLECULAR PATHOGENESIS

IgE Is an Outer Membrane-Associated Lipoprotein Essential for Intracellular Survival and Murine Virulence of Type A <i>Francisella tularensis</i>	Gregory T. Robertson, Robert Child, Christine Ingle, Jean Celli, Michael V. Norgard	4026–4040
Analysis of Autoinducer-2 Quorum Sensing in <i>Yersinia pestis</i>	Jing Yu, Melissa L. Madsen, Michael D. Carruthers, Gregory J. Phillips, Jeffrey S. Kavanaugh, Jeff M. Boyd, Alexander R. Horswill, F. Chris Minion	4053–4062
The RNA Chaperone Hfq Is Required for Virulence of <i>Bordetella pertussis</i>	Ilona Bibova, Karolina Skopova, Jiri Masin, Ondrej Cerny, David Hot, Peter Sebo, Branislav Vecerek	4081–4090
Relative Contributions of Lipooligosaccharide Inner and Outer Core Modifications to Nontypeable <i>Haemophilus influenzae</i> Pathogenesis	Pau Morey, Cristina Viadas, Begoña Euba, Derek W. Hood, Montserrat Barberán, Carmen Gil, María Jesús Grilló, José Antonio Bengoechea, Junkal Garmendia	4100–4111
The <i>Haemophilus ducreyi</i> Fis Protein Is Involved in Controlling Expression of the <i>lspB-lspA2</i> Operon and Other Virulence Factors	Maria Labandeira-Rey, Dana A. Dodd, Chad A. Brautigam, Kate R. Fortney, Stanley M. Spinola, Eric J. Hansen	4160–4170
The Acyl-Homoserine Lactone Synthase YenI from <i>Yersinia enterocolitica</i> Modulates Virulence Gene Expression in Enterohemorrhagic <i>Escherichia coli</i> O157:H7	Y N. Nguyen, Haiqing Sheng, Rambabu Dakarapu, John R. Falck, Carolyn J. Hovde, Vanessa Sperandio	4192–4199
Small-Molecule Inhibitor of the <i>Shigella flexneri</i> Master Virulence Regulator VirF	Veerendra Koppolu, Ichie Osaka, Jeff M. Skredenske, Bria Kettle, P. Scott Hefty, Jiaqin Li, Susan M. Egan	4220–4231
Control of Bacterial Virulence by the RalR Regulator of the Rabbit-Specific Enteropathogenic <i>Escherichia coli</i> Strain E22	Yogitha N. Srikhanta, Dianna M. Hocking, Matthew J. Wakefield, Ellen Higginson, Roy M. Robins-Browne, Ji Yang, Marija Tauschek	4232–4243
Mutation of the Conserved Calcium-Binding Motif in <i>Neisseria gonorrhoeae</i> PilC1 Impacts Adhesion but Not Piliation	Yuan Cheng, Michael D. L. Johnson, Christine Burillo-Kirch, Jeffrey C. Mocny, James E. Anderson, Christopher K. Garrett, Matthew R. Redinbo, Christopher E. Thomas	4280–4289

<b>Novel Determinants of Intestinal Colonization of <i>Salmonella enterica</i> Serotype Typhimurium Identified in Bovine Enteric Infection</b>	Johanna R. Elfenbein, Tiana Endicott-Yazdani, Steffen Porwollik, Lydia M. Bogomolnaya, Pui Cheng, Jinbai Guo, Yi Zheng, Hee-Jeong Yang, Marissa Talamantes, Christine Shields, Aimee Maple, Yury Ragoza, Kimberly DeAtley, Tyler Tatsch, Ping Cui, Katharine D. Andrews, Michael McClelland, Sara D. Lawhon, Helene Andrews-Polymenis	4311–4320
<b>CELLULAR MICROBIOLOGY: PATHOGEN-HOST CELL MOLECULAR INTERACTIONS</b>		
<b><i>Leishmania amazonensis</i> Amastigotes Trigger Neutrophil Activation but Resist Neutrophil Microbicidal Mechanisms</b>	Eric D. Carlsen, Christie Hay, Calvin A. Henard, Vsevolod Popov, Nisha Jain Garg, Lynn Soong	3966–3974
<b>Augmentation of Epithelial Resistance to Invading Bacteria by Using mRNA Transfections</b>	Xianqiong Zou, Brent S. Sorenson, Karen F. Ross, Mark C. Herzberg	3975–3983
<b>Cytoadherence of <i>Plasmodium berghei</i>-Infected Red Blood Cells to Murine Brain and Lung Microvascular Endothelial Cells <i>In Vitro</i></b>	Fatima El-Assaad, Julie Wheway, Andrew John Mitchell, Jinning Lou, Nicholas Henry Hunt, Valery Combes, Georges Emile Raymond Grau	3984–3991
<b>Role of <i>Yersinia pestis</i> Toxin Complex Family Proteins in Resistance to Phagocytosis by Polymorphonuclear Leukocytes</b>	Justin L. Spinner, Aaron B. Carmody, Clayton O. Jarrett, B. Joseph Hinnebusch	4041–4052
<b>Transcriptional Profiling of <i>Neisseria meningitidis</i> Interacting with Human Epithelial Cells in a Long-Term <i>In Vitro</i> Colonization Model</b>	Ariann Hey, Ming-Shi Li, Michael J. Hudson, Paul R. Langford, J. Simon Kroll	4149–4159
<b>LtpD Is a Novel <i>Legionella pneumophila</i> Effector That Binds Phosphatidylinositol 3-Phosphate and Inositol Monophosphatase IMPA1</b>	Clare R. Harding, Corinna Mattheis, Aurélie Mousnier, Clare V. Oates, Elizabeth L. Hartland, Gad Frankel, Gunnar N. Schroeder	4261–4270
<b>Deciphering the Contribution of Human Meningothelial Cells to the Inflammatory and Antimicrobial Response at the Meninges</b>	Pierre-Joseph Royer, Andrew J. Rogers, Karl G. Wooldridge, Patrick Tighe, Jafar Mahdavi, Michael G. Rittig, Dlawer Ala'Aldeen	4299–4310
<b>BACTERIAL INFECTIONS</b>		
<b>Human and Animal Isolates of <i>Yersinia enterocolitica</i> Show Significant Serotype-Specific Colonization and Host-Specific Immune Defense Properties</b>	Julia Schaake, Malte Kronshage, Frank Uliczka, Manfred Rohde, Tobias Knuuti, Eckhard Strauch, Angelika Fruth, Melissa Wos-Oxley, Petra Dersch	4013–4025
<b>The Ferric Enterobactin Transporter Fep Is Required for Persistent <i>Salmonella enterica</i> Serovar Typhimurium Infection</b>	Toni A. Nagy, Sarah M. Moreland, Helene Andrews-Polymenis, Corrella S. Detweiler	4063–4070
<b>Mucosal Vaccination against Tuberculosis Using Inert Bioparticles</b>	Rajko Reljic, Laura Sibley, Jen-Min Huang, Ilaria Pepponi, Andreas Hoppe, Huynh A. Hong, Simon M. Cutting	4071–4080
<b>MrkD<sub>1P</sub> from <i>Klebsiella pneumoniae</i> Strain IA565 Allows for Coexistence with <i>Pseudomonas aeruginosa</i> and Protection from Protease-Mediated Biofilm Detachment</b>	Brandon M. Childers, Tricia A. Van Laar, Tao You, Steven Clegg, Kai P. Leung	4112–4120
<b>Characterization of <i>sil</i> in Invasive Group A and G Streptococci: Antibodies against Bacterial Pheromone Peptide SilCR Result in Severe Infection</b>	Ayelet Michael-Gayego, Mary Dan-Goor, Joseph Jaffe, Carlos Hidalgo-Grass, Allon E. Moses	4121–4127

Natural Variation in the Promoter of the Gene Encoding the Mga Regulator Alters Host-Pathogen Interactions in Group A <i>Streptococcus</i> Carrier Strains	Anthony R. Flores, Randall J. Olsen, Andrea Wunsche, Muthiah Kumaraswami, Samuel A. Shelburne III, Ronan K. Carroll, James M. Musser	4128–4138
Secreted Pyomelanin of <i>Legionella pneumophila</i> Promotes Bacterial Iron Uptake and Growth under Iron-Limiting Conditions	Huaixin Zheng, Christa H. Chatfield, Mark R. Liles, Nicholas P. Cianciotto	4182–4191
YaxAB, a <i>Yersinia enterocolitica</i> Pore-Forming Toxin Regulated by RovA	Nikki J. Wagner, Carolina P. Lin, Luke B. Borst, Virginia L. Miller	4208–4219
Zebrafish as a Novel Vertebrate Model To Dissect Enterococcal Pathogenesis	Tomasz K. Prajsnar, Stephen A. Renshaw, Nikolay V. Ogryzko, Simon J. Foster, Pascale Serror, Stéphane Mesnage	4271–4279
<b>HOST RESPONSE AND INFLAMMATION</b>		
Virulence and Immune Response Induced by <i>Mycobacterium avium</i> Complex Strains in a Model of Progressive Pulmonary Tuberculosis and Subcutaneous Infection in BALB/c Mice	Mónica González-Pérez, Leonardo Mariño-Ramírez, Carlos Alberto Parra-López, Martha Isabel Murcia, Brenda Marquina, Dulce Mata-Espinoza, Yadira Rodríguez-Míguez, Guillermina J. Baay-Guzman, Sara Huerta-Yepe, Rogelio Hernandez-Pando	4001–4012
CD38 Controls the Innate Immune Response against <i>Listeria monocytogenes</i>	Timo Lischke, Kira Heesch, Valéa Schumacher, Michael Schneider, Friedrich Haag, Friedrich Koch-Nolte, Hans-Willi Mittrücker	4091–4099
Shedding of Tumor Necrosis Factor Receptor 1 Induced by Protein A Decreases Tumor Necrosis Factor Alpha Availability and Inflammation during Systemic <i>Staphylococcus aureus</i> Infection	Constanza Gai, Cintia Gonzalez, Camila Ledo, Ailin Garofalo, María Silvia Di Genaro, Daniel O. Sordelli, Marisa I. Gomez	4200–4207
Platelet-Activating Factor Receptor Blockade Ameliorates <i>Aggregatibacter actinomycetemcomitans</i> -Induced Periodontal Disease in Mice	Mila Fernandes Moreira Madeira, Celso Martins Queiroz-Junior, Graciela Mitre Costa, Silvia Maria Cordeiro Werneck, Daniel Cisalpino, Gustavo Pompermaier Garlet, Mauro Martins Teixeira, Tarcília Aparecida Silva, Daniele G. Souza	4244–4251
<b>FUNGAL AND PARASITIC INFECTIONS</b>		
Cellular Response to <i>Trypanosoma cruzi</i> Infection Induces Secretion of Defensin $\alpha$ -1, Which Damages the Flagellum, Neutralizes Trypanosome Motility, and Inhibits Infection	Candice A. Johnson, Girish Rachakonda, Yuliya Y. Kleshchenko, Pius N. Nde, M. Nia Madison, Siddharth Pratap, Tatiana C. Cardenas, Chase Taylor, Maria F. Lima, Fernando Villalta	4139–4148
B Cell Production of Tumor Necrosis Factor in Response to <i>Pneumocystis murina</i> Infection in Mice	Michael M. Opata, Zhan Ye, Melissa Hollifield, Beth A. Garvy	4252–4260
RALP1 Is a Rhoptry Neck Erythrocyte-Binding Protein of <i>Plasmodium falciparum</i> Merozoites and a Potential Blood-Stage Vaccine Candidate Antigen	Daisuke Ito, Tomoyuki Hasegawa, Kazutoyo Miura, Tsutomu Yamasaki, Thangavelu U. Arumugam, Amporn Thongkukiatkul, Satoru Takeo, Eizo Takashima, Jetsumon Sattabongkot, Eun-Taek Han, Carole A. Long, Motomi Torii, Takafumi Tsuboi	4290–4298

## MICROBIAL IMMUNITY AND VACCINES

**Identification of a Human Monoclonal Antibody To Replace Equine Diphtheria Antitoxin for Treatment of Diphtheria Intoxication**

Leila M. Sevigny, Brian J. Booth, Kirk J. Rowley, Brett A. Leav, Peter S. Cheslock, Kerry A. Garrity, Susan E. Sloan, William Thomas, Jr., Gregory J. Babcock, Yang Wang 3992–4000

**Short-Lived Effector CD8 T Cells Induced by Genetically Attenuated Malaria Parasite Vaccination Express CD11c**

Laura A. Cooney, Megha Gupta, Sunil Thomas, Sebastian Mikolajczak, Kimberly Y. Choi, Claire Gibson, Ihn K. Jang, Sam Danziger, John Aitchison, Malcolm J. Gardner, Stefan H. I. Kappe, Ruobing Wang 4171–4181

## AUTHORS' CORRECTIONS

**M-Ficolin Binds Selectively to the Capsular Polysaccharides of *Streptococcus pneumoniae* Serotypes 19B and 19C and of a *Streptococcus mitis* Strain**

Troels R. Kjaer, Annette G. Hansen, Uffe B. S. Sørensen, Anne T. Holm, Grith L. Sørensen, Jens C. Jensenius, Steffen Thiel 4321

**Effect of the Leptin Receptor Q223R Polymorphism on the Host Transcriptome following Infection with *Entamoeba histolytica***

Nicole M. Mackey-Lawrence, Xiaoti Guo, Daniel E. Sturdevant, Kimmo Virtaneva, Matthew M. Hernandez, Eric Houpt, Alan Sher, Stephen F. Porcella, William A. Petri, Jr. 4322

**Monocyte Chemoattractant Protein 1 Regulates Pulmonary Host Defense via Neutrophil Recruitment during *Escherichia coli* Infection**

Gayathriy Balamayooran, Sanjay Batra, Theivanthiran Balamayooran, Shanshan Cai, Samithamby Jeyaseelan 4323

**NOD2 Signaling Contributes to Host Defense in the Lungs against *Escherichia coli* Infection**

Balamayooran Theivanthiran, Sanjay Batra, Gayathriy Balamayooran, Shanshan Cai, Koichi Kobayashi, Richard A. Flavell, Samithamby Jeyaseelan 4324