This information is current as of May 1, 2017.
IN THIS ISSUE

4469  Minding the GAP in Asthma  See article p. 4514
Tumor Regression Sans Side Effects?  See article p. 4589
TNF-α Fazes Circadian Gene Timing  See article p. 4656
TLR4 Takes on Toxins  See article p. 4748
Tolling Toxoplasma  See article p. 4818

LETTERS TO THE EDITOR

4471  Comment on “Multiplex B Cell Characterization in Blood, Lymph Nodes, and Tumors from Patients with Malignancies”
Alexander Shimabukuro-Vornhagen, Hans Anton Schlöfer, Dirk Ludger Stippel, Sebastian Theurich, and Michael von Bergwelt-Baildon

4471  Response to Comment on “Multiplex B Cell Characterization in Blood, Lymph Nodes, and Tumors from Patients with Malignancies”
Per Marits, Ali A. Zirakzadeh, Amir Sherif, and Ola Winquist

PILLARS OF IMMUNOLOGY

4473  Pattern Recognition Theory and the Launch of Modern Innate Immunity
Ruslan Medzhitov

Charles A. Janeway, Jr.

BRIEF REVIEWS

4489  Taming the Beast within: Regulation of Innate Lymphoid Cell Homeostasis and Function
Wei Xu and James P. Di Santo
CUTTING EDGE

4499 Cutting Edge: CD1a Tetramers and Dextramers Identify Human Lipopeptide–Specific T Cells Ex Vivo
Anne G. Kasmar, Ilitiku Van Rhijn, Kelly G. Magalhaes, David C. Young, Tan-Yun Cheng, Marie T. Turner, Andre Schiefner, Ravi C. Kalathur, Ian A. Wilson, Mugdha Bhati, Stephanie Gras, Richard W. Birkshaw, Li L. Tan, Jamie Roujouh, John Shires, Søren Jakobien, John D. Altman, and D. Branch Moody

ALLERGY AND OTHER HYPERSENSITIVITIES

4505 Genotype-Dependent Effects of TGF-β1 on Mast Cell Function: Targeting the Stat5 Pathway
Josephine Fernando, Travis W. Faber, Nicholas A. Pullen, Yves T. Falanga, Elizabeth Moturnayo Kolawole, Carole A. Okeritizian, Brian O. Barnstein, Geethani Bandara, Geqiang Li, Lawrence B. Schwartz, Sarah Spiegel, David B. Straus, Daniel H. Conrad, Kevin D. Bunting, and John F. Ryan

4514 Abr, a Negative Regulator of Rac, Attenuates Cockroach Allergen–Induced Asthma in a Mouse Model
Dapeng Gong, Fei Fei, Min Lim, Min Yu, John Groffen, and Nora Heisterkamp

ANTIGEN RECOGNITION AND RESPONSES

4521 AID-Expressing Germinal Center B Cells Cluster Normally within Lymph Node Follicles in the Absence of FDC-M1+ CD35+ Follicular Dendritic Cells but Dissipate Prematurely
Bryant Bowlamine, Michael X. Le, Leisle A. Ward, Lingjin Meng, Dania Haddad, Conglei Li, Alberto Martin, and Jennifer L. Gommerman

AUTOIMMUNITY

4531 Neutrophils Amplify Autoimmune Central Nervous System Infiltrates by Maturing Local APCs
Karlin Steinbach, Melanie Pietaventi, Simone Bauer, Johannes T. Neumann, and Manuel A. Friese

4540 Selective Inhibition of BTK Prevents Murine Lupus and Antibody-Mediated Glomerulonephritis
Andrew L. Rankin, Nilufer Seth, Sean Keegan, Tatjana Andrejeva, Tim A. Cook, Jason Edmonds, Nagappan Mathialagan, Michal J. Benson, Jameel Syed, Yutian Zhan, Stephen E. Benoit, Joy S. Miyashiro, Nancy Wood, Shashi Mohan, Elena Peeva, Shashi K. Ramaiiah, Dean Meeising, Bruce L. Homer, Kyri Dunusio-Joannopoulos, Cheryl L. Nickerson-Nutter, Mark E. Schnute, and John Doushan, III

4551 Syndecan-1, a Cell Surface Proteoglycan, Negatively Regulates Initial Leukocyte Recruitment to the Brain across the Choroid Plexus in Murine Experimental Autoimmune Encephalomyelitis
Xueli Zhang, Chuan Wu, Jian Song, Martin Götte, and Lydia Sorokin

4562 TIM-4 Has Dual Function in the Induction and Effector Phases of Murine Arthritis
Yoshiyuki Abe, Fumiakata Kamachi, Toshiaki Kawamoto, Fumihiko Makino, Jun Ito, Yoko Koikima, Alaa El Din Hussein Moustafa, Yoshihiko Ushi, Hideo Yagita, Yoshihri Takasaki, Ko Okumura, and Hiroya Akiba

CLINICAL AND HUMAN IMMUNOLOGY

4581 IL-21 Is a Double-Edged Sword in the Systemic Lupus Erythematosus–like Disease of BXSB.Yaa Mice
Caroline G. McPherson, Jason A. Bubier, Thomas J. Sproule, Giljun Park, Martin P. Steinbuck, William H. Schott, Gregory J. Christianson, Herbert C. Morse, III, and Derry C. Roopenian

4589 Preclinical In Vivo Modeling of Cytokine Release Syndrome Induced by ErbB-Retargeted Human T Cells: Identifying a Window of Therapeutic Opportunity?

4599 A Monovalent Anti-Human CD28 Domain Antibody Antagonist: Preclinical Efficacy and Safety
Human CD4+CD3− Innate-Like T Cells Provide a Source of TNF and Lymphotxin-αβ and Are Elevated in Rheumatoid Arthritis
Vasilios Bekiaris, John R. Sedg, Maura Rossetti, Roberto Spreafico, Shilpi Sharma, Antje Rhode-Kurnow, Brian C. Ware, Nini Huang, Matthew G. Macauley, Paula S. Norris, Salvatore Albani, and Carl F. Ware

IMMUNE REGULATION

Human Memory Helios− FOXP3+ Regulatory T Cells (Tregs) Encompass Induced Tregs That Express Aiolos and Respond to IL-1β by Downregulating Their Suppressor Functions
Caroline Raffin, Pascale Pignon, Clotilde Celse, Emilie Deben, Danila Valmori, and Maha Ayyoub

Estrogen Signaling through the G Protein−Coupled Estrogen Receptor Regulates Granulocyte Activation in Fish
Isabel Cabas, M. Carmen Rodenas, Emilia Abellán, José Meseguer, Víctoriano Mulero, and Alfonsa García-Ayala

Inhibition of NF-κB by Opioids in T Cells
Christine Börner and Jürgen Kraus

Increased Mammalian Target of Rapamycin Complex 2 Signaling Promotes Age-Related Decline in CD4 T Cell Signaling and Function
Eric Perkey, Diane Finger, Richard A. Miller, and Gonzalo G. García

Suprachiasmatic Astrocytes Modulate the Circadian Clock in Response to TNF-α
José M. Dubart, María Julianna Leone, Natalia Paladino, Jennifer A. Evans, Oscar Castanon-Cervantes, Alec J. Davidson, and Diego A. Golombek

IMMUNE SYSTEM DEVELOPMENT

Identification of a Tissue-Specific, C/EBPβ-Dependent Pathway of Differentiation for Murine Peritoneal Macrophages
Derek W. Cain, Emily G. O’Koren, Matthew J. Kan, Mandy Womble, Gregory D. Sempowski, Kristen Hopper, Michael D. Gunn, and Garnett Kelsoe

Ebf1 and c-Myb Repress Rag Transcription Downstream of Stat5 during Early B Cell Development
Greg A. Timblin and Mark S. Schlissel

The Host Environment Is Responsible for Aging-Related Functional NK Cell Deficiency
Bo-Chin Chiu, Brian E. Martin, Valerie R. Stolberg, and Stephen W. Chensue

INFECTIOUS DISEASE AND HOST RESPONSE

The Transcription Factor T-bet Regulates Parasitemia and Promotes Pathogenesis during Plasmodium berghei ANKA Murine Malaria
Miranda S. Oakley, Bikash R. Sahu, Leda Latschev-Cole, Nehal R. Solanki, Victoria Majam, Phuong Thao Pham, Rajdeep Banerjee, Yukiko Koizumi, Steven C. Derrick, Sanjai Kumar, and Sheldon L. Morris

Multiparametric Analysis of Host Response to Murine Cytomegalovirus in MHC Class I–Disparate Mice Reveals Primacy of Dα-Licensed Ly49G2+ NK Cells in Viral Control

Selective Ablation of Lung Epithelial IKK2 Impairs Pulmonary Th17 Responses and Delays the Clearance of Pneumocystis
Nelissa Perez-Nazario, Javier Rangel-Moreno, Michael A. O’Reilly, Manolis Paparaki, Francis Gigliotti, and Terry W. Wright

Acute Plasmodium chabaudi Infection Dampens Humoral Responses to a Secondary T-Dependent Antigen but Enhances Responses to a Secondary T-Independent Antigen
Joel R. Wilmore, Alexander C. Mune, Julie S. Lefebvre, Laura Haynes, and Rosemary Rochford

The MyD88 Pathway in Plasmacytoid and CD4+ Dendritic Cells Primarily Triggers Type I IFN Production against Measles Virus in a Mouse Infection Model
Hiromi Takaki, Makoto Takeda, Maino Tahara, Masashi Shingai, Hiroyuki Oshiumi, Misato Matsumoto, and Tsukasa Seya
Identification of TLR4 as the Receptor That Recognizes Shiga Toxins in Human Neutrophils
Maurizio Brigotti, Domenica Carmielli, Valentina Arfilli, Nicola Tamassia, Francesca Borsetti, Elena Fabbri, Pier Luigi Tazzari, Francesca Ricci, Pasquale Paolo Faglia, Enzo Spisni, and Marco A. Casatella

TLR2-Induced IL-10 Production Impairs Neutrophil Recruitment to Infected Tissues during Neonatal Bacterial Sepsis
Elva B. Andrade, Joana Alves, Pedro Madureira, Liliana Oliveira, Adilia Ribeiro, Anabela Cordeiro-da-Silva, Margarida Correia-Neves, Patrick Trieu-Cuot, and Paula Ferreira

INNATE IMMUNITY AND INFLAMMATION

Chimeric Anti-CD14 IgG2/4 Hybrid Antibodies for Therapeutic Intervention in Pig and Human Models of Inflammation
Corinna Lau, Kristin S. Gunnarsen, Lene S. Høydahl, Jan Terje Andersen, Gøri Benzen, Anne Pharø, Julie K. Lindstad, Judith K. Ludvigsen, Ole-Lars Brekke, Andreas Barratt-Due, Erik Waage Nielsen, Christopher R. Stokes, Terje Espesk, Inger Sandlie, and Tom Eirik Mollnes

Large Spectrum of HLA-C Recognition by Killer Ig-like Receptor (KIR)2DL2 and KIR2DL3 and Restricted C1 Specificity of KIR2DS2: Dominant Impact of KIR2DL2/KIR2DS2 on KIR2D NK Cell Repertoire Formation
Gaelle David, Zakia Djaoud, Catherine Willem, Noluvann Legrand, Pauline Rettman, Katia Gagne, Anne Cesbron, and Christelle Retiere

Proapoptotic Chemotherapeutic Drugs Induce Noncanonical Processing and Release of IL-1β via Caspase-8 in Dendritic Cells
Christina Antonopoulos, Caroline El Sanadi, William J. Kaiser, Edward S. Mocarski, and George R. Dubyak

α3/4 Fucosyltransferase 3–Dependent Synthesis of Sialyl Lewis A on CD44 Variant Containing Exon 6 Mediates Polymorphonuclear Leukocyte Detachment from Intestinal Epithelium during Transepithelial Migration
Jennifer C. Brazil, Renpeng Liu, Ronen Sumagin, Keli N. Kolegroat, Asma Nusrat, Richard D. Cummins, Charles A. Parkos, and Nancy A. Louis

Cooperation of TLR12 and TLR11 in the IRF8-Dependent IL-12 Response to Toxoplasma gondii Profilin
Megan Raetz, Alexey Kibardin, Carolyn R. Sturge, Reed Pifer, Haiying Li, Ezra Burstein, Keiko Ozato, Sergey Larin, and Felix Yarovinsky

Neuraminidase Reprograms Lung Tissue and Potentiates Lipopolysaccharide-Induced Acute Lung Injury in Mice
Chiguang Feng, Lei Zhang, Chinh Nguyen, Stefanie N. Vogel, Simeon E. Goldblum, William C. Blackwelder, and Alan S. Cross

IL-1 Induces Proinflammatory Leukocyte Infiltration and Regulates Fibroblast Phenotype in the Infarcted Myocardium
Amit Saxena, Wei Chen, Ya Su, Vikrant Rai, Oluisambo U. Uche, Na Li, and Nikolaos G. Frangogiannis

Enhanced Atherosclerosis in TIPE2-Deficient Mice Is Associated with Increased Macrophage Responses to Oxidized Low-Density Lipoprotein
Yunwei Lou, Suxia Liu, Cheng Zhang, Guizhong Zhang, Jingling Li, Mei Ni, Guipeng An, Mei Dong, Xiaoling Liu, Faliang Zhu, Wengqian Zhang, Fei Gao, Youhai H. Chen, and Yun Zhang

Characterization of Human Afferent Lymph Dendritic Cells from Seroma Fluids
Barbara Morandi, Irene Bonaccorsi, Mario Mesiti, Romana Conte, Paolo Carrega, Gregorio Costa, Raffaella Iemmo, Stefania Martini, Soldano Ferrone, Claudia Canton, Maria Cristina Mingari, Lorenzo Moretta, and Guido Ferlazzo

MUCOSAL IMMUNOLOGY

Evidence for a Functional Thymic Stromal Lymphopoietin Signaling Axis in Fibrotic Lung Disease
Arnab Datta, Robert Alexander, Michal G. Sulikowski, Andrew G. Nicholson, Toby M. Maher, Chris J. Scotton, and Rachel C. Chambers
Characterization of Distinct Immunophenotypes across Pediatric Brain Tumor Types
Andrea M. Griesinger, Diane K. Birks, Andrew M. Donson, Vladimir Amani, Lindsey M. Hoffman, Allen Waziri, Michael Wang, Michael H. Handler, and Nicholas K. Foreman