3941 IN THIS ISSUE

LETTERS TO THE EDITOR

3943 Comment on “The Anergic State in Sarcoidosis Is Associated with Diminished Dendritic Cell Function”
Christian D. Becker and Alvin S. Teirstein

3943 Response to Comment on “The Anergic State in Sarcoidosis Is Associated with Diminished Dendritic Cell Function”
Stephen J. Oliver

PILLARS OF IMMUNOLOGY

3945 The Unexpected Pleiotropic Activities of RANTES
Jay A. Levy

Thomas J. Schall, Jan Jongstra, Bradley J. Dyer, Jeffrey Jorgensen, Carol Clayberger, Mark M. Davis, and Alan M. Krensky

CUTTING EDGE

3955 Cutting Edge: Ikaros Null Thymocytes Mature into the CD4 Lineage with Reduced TCR Signal: A Study Using CD3ζ Immunoreceptor Tyrosine-Based Activation Motif Transgenic Mice
Julie A. Urban, William Brugmann, and Susan Winandy

3960 Cutting Edge: TLR-Dependent Viral Recognition Along with Type I IFN Positive Feedback Signaling Masks the Requirement of Viral Replication for IFN-α Production in Plasmacytoid Dendritic Cells
Yutaro Kuniyuki, Himanshu Kumar, Shobei Koyama, Taro Kawai, Osamu Takeuchi, and Shizuo Akira

3965 Cutting Edge: A2B Adenosine Receptor Signaling Provides Potent Protection during Intestinal Ischemia/Reperfusion Injury
Melanie L. Hart, Barbara Jacob, Jens Schittenhelm, Martina Henn, and Holger K. Eltzschig

On the cover: In pneumococcal pneumonia, pulmonary RAGE expression is up-regulated compared with normal situations as reflected by more intense staining (brown). Like in normal situations, the staining has an endothelial pattern: bronchial epithelial cells are negative. Moreover, neutrophils recruited to an area of confluent pneumonia (aqua/green) hardly express RAGE. van Zoelen, M. A. D., M. Schouten, A. F. de Vos, S. Florquin, J. C. M. Meijers, P. P. Nawroth, A. Bierhaus, and T. van der Poll. 2009. The receptor for advanced glycation end products impairs host defense in pneumococcal pneumonia. J. Immunol. 182: 4349 – 4356.
Cutting Edge: Acute Lung Allograft Rejection Is Independent of Secondary Lymphoid Organs

Cutting Edge: Dok-1 and Dok-2 Adaptor Molecules Are Regulated by Phosphatidylinositol 5-Phosphate Production in T Cells
Geoffrey Guittard, Audrey Gérard, Sophie Dupuis-Coronas, Hélène Tronchère, Eva Mortier, Cédric Favre, Daniel Olive, Pascale Zimmermann, Bernard Payrastre, and Jacques A. Nunez

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

CD4-Positive T Lymphocytes Provide a Neuroimmunological Link in the Control of Adult Hippocampal Neurogenesis
Susanne A. Wolf, Barbara Steiner, Akgul Akpinarli, Thomas Kammerlohs, Christina Nasenstein, Armin Braun, Thomas Blankestein, and Gerd Kemppainen

Anti-CD25 Antibody-Mediated Depletion of Effector T Cell Populations Enhances Susceptibility of Mice to Acute but Not Chronic Toxoplasma gondii Infection
Kevin N. Couper, Paula A. Lanthier, Georgia Perona-Wright, Lawrence W. Kammer, Wangxue Chen, Stephen T. Smiley, Markus Mohrs, and Lawrence L. Johnson

Protective Antigen-Independent CD8 T Cell Memory Is Maintained during γ-Herpesvirus Persistence
Stephanie S. Cash and Emilio Flahno

Recombinant Ov-ASP-1, a Th1-Biased Protein Adjuvant Derived from the Helminth Onchocerca volvulus, Can Directly Bind and Activate Antigen-Presenting Cells
Yuxian He, Sophie J. Barker, Angus J. MacDonald, Yu Yu, Long Cao, Jingjing Li, Ranjit Parhar, Susanne Heck, Susanne Hartmann, Douglas A. Golenbock, Shibo Jiang, Nathan A. Liberi, Amanda E. Semper, William M. Rosenberg, and Sara Lustgarten

Inhibition of cAMP Degradation Improves Regulatory T Cell-Mediated Suppression

Histoplasma capsulatum Cell Wall β-Glucan Induces Lipid Body Formation through CD18, TLR2, and Dectin-1 Receptors: Correlation with Leukotriene B4 Generation and Role in HIV-1 Infection
Carlos Artério Sorgi, Adriana Secatto, Caroline Fontanari, Walter Miguel Turato, Caroline Belanger, Alexandra Ivo de Medeiros, Simone Kashima, Sylvie Marleau, Dimas Tadeu Covas, Patricia Torres Bozza, and Lucia Helena Faccioli

Cross-Linking of GM1 Ganglioside by Galectin-1 Mediates Regulatory T Cell Activity Involving TRPC5 Channel Activation: Possible Role in Suppressing Experimental Autoimmune Encephalomyelitis
Jianfeng Wang, Zi-Hua Lu, Hani-Joachim Gahbiu, Christine Rohowsky-Kochan, Robert W. Ledeen, and Gusheg Wu

Autophagy Is Essential for Mitochondrial Clearance in Mature T Lymphocytes
Heather H. Pua, Jian Guo, Masaiki Komatsu, and You-Wen He

Human Benign Prostatic Hyperplasia Stromal Cells As Inducers and Targets of Chronic Immuno-Mediated Inflammation
Giuseppe Penna, Benedetta Filibbi, Susana Amuchastegui, Chiara Cossetti, Francesca Aquilano, Gilles Lavrenty, Mauro Gacci, Clara Crescioli, Mario Maggi, and Luciano Adorini

Reduced c-myc Expression Levels Limit Follicular Mature B Cell Cycling in Response to TLR Signals
Almut Meyer-Bahlburg, Ashok D. Bandaranayake, Sarah F. Andrews, and David J. Rawlings

ICOS Controls Effector Function but Not Trafficking Receptor Expression of Kidney-Infiltrating Effector T Cells in Murine Lupus
Jared M. Odegard, Leah D. DiPlacido, Lark Greenland, Michael Khashgarian, Dwight H. Kono, Chen Dong, Richard A. Flavell, and Joe Craft

Vascular Endothelial Growth Factor C Facilitates Immune Tolerance and Endovascular Activity of Human Uterine NK Cells at the Maternal-Fetal Interface
PTPN22 Deficiency Cooperates with the CD45 E613R Allele to Break Tolerance on a Non-Autoimmune Background
Julie Zikherman, Michelle Hermiston, David Steiner, Kiminori Hasegawa, Andrew Chan, and Arthur Weiss

4-1BB Functions As a Survival Factor in Dendritic Cells
Beom K. Choi, Young H. Kim, Patrick M. Kuwon, Sang C. Lee, Sang W. Kang, Moon S. Kim, Myoung J. Lee, and Byoung S. Kuwon

Identification and Characterization of a Human CD5+ Pre-Naive B Cell Population
Jisoo Lee, Stefan Kuchen, Randy Fischer, Sooghee Chang, and Peter E. Lipsky

Novel Subset of CD8α+ Dendritic Cells Localized in the Marginal Zone Is Responsible for Tolerance to Cell-Associated Antigens
Chun-Hong Qiu, Yasunobu Miyake, Hitomi Kaise, Hiroshi Kitamura, Osumi Ohara, and Masato Tanaka

Nitratated α-Synuclein-Induced Alterations in Microglial Immunity Are Regulated by CD4+ T Cell Subsets
Ashley D. Reynolds, David K. Stone, R. Lee Mosley, and Howard E. Gendelman

CLEC-2 Is a Phagocytic Activation Receptor Expressed on Murine Peripheral Blood Neutrophils
Ann M. Kerrigan, Kevin M. Dennely, Diego Mourão-Sá, Inês Faro-Trindade, Janet A. Willment, Philip R. Taylor, Johannes A. Eble, Caetano Reis e Sousa, and Gordon D. Brown

Intestinal T Cell Responses to Gluten Peptides Are Largely Heterogeneous: Implications for a Peptide-Based Therapy in Celiac Disease
Alessandra Camarca, Robert P. Anderson, Gianfranco Mamone, Olga Fierro, Angelo Facchiano, Susan Costantini, Delia Zanzi, John Sidney, Salvatore Auricchio, Alessandro Sette, Riccardo Troncone, and Carmen Gianfrani

The Cyclic AMP Response Element Modulator α Suppresses CD86 Expression and APC Function
Martina Ahlmann, Georg Varga, Karsten Sturm, Ralph Lippe, Konrad Benedykh, Donnies Viermann, Thomas Scholzen, Jan Ehrchen, Frank U. Müller, Matthias Seidl, Marek Matus, George C. Tsokos, Johannes Roth, and Klaus Tenbrock

Functional Killer Ig-Like Receptors on Human Memory CD4+ T Cells Specific for Cytomegalovirus
Jeroen van Bergen, Engelina M. C. Kooy-Winkelaar, Henrike van Dongen, Floris A. van Gaalen, Allan Thompson, Tom W. J. Huizinga, Mariet C. W. Feltkamp, René E. M. Toes, and Frits Koning

Ncf1 Provides a Reactive Oxygen Species-Independent Negative Feedback Regulation of TLR9-Induced IL-12p70 in Murine Dendritic Cells
Cornelia Richter, Martina Herrero San Juan, Jutta Will, Ralf P. Brandes, Ulrich Kalinke, Shizuo Akira, Josef M. Pfliegesfli, Malin Hulqvist, Rikard Holmdahl, and Heinfried H. Radeke

Signal Transduction Inhibition of APCs Diminishes Th17 and Th1 Responses in Experimental Autoimmune Encephalomyelitis
Mario Skarica, Tianhong Wang, Erin McCadden, David Kardian, Peter A. Calabresi, Donald Small, and Katharine A. Whartenby

Characterization of an Immediate Splenic Precursor of CD8+ Dendritic Cells Capable of Inducing Antiviral T Cell Responses
Sammy Bedoui, Sandro Prato, Justine Minterm, Thomas Gebhardt, Yifan Zhan, Andrew M. Lew, William R. Heath, José A. Villadangos, and Elodie Segura

TLR2/MyD88-Dependent and -Independent Activation of Mast Cell IgE Responses by the Skin Commensal Yeast Malassezia sympodialis
Christine Selander, Camilla Engblom, Gunnar Nilson, Annika Scheuny, and Carolina Lunderius Andersson

Central Role of Tumor-Associated CD8+ T Effector/Memory Cells in Restoring Systemic Antitumor Immunity
Mehmet O. Kilinc, Tuo Gu, Jamie L. Harden, Lauren P. Virtuoso, and Nejat K. Egilmez

B Cell Proliferation, Somatic Hypermutation, Class Switch Recombination, and Autoantibody Production in Ectopic Lymphoid Tissue in Murine Lupus
Dina C. Nacionales, Jason S. Weinstein, Xiao-jie Yan, Emilia Albesiano, Pui Y. Lee, Kindra M. Kelly-Scumpia, Robert Lyons, Minoru Satoh, Nicholas Chiorazzi, and Westley H. Reeves
Molecular and Structural Immunology

MOLECULAR AND STRUCTURAL IMMUNOLOGY

4275 Human IgG4 Binds to IgG4 and Conformationally Altered IgG1 via Fc-Fc Interactions
Theo Rispens, Pleuni Ooievaar-De Heer, Ellen Vermeulen, Janine Schuurman, Marijn van der Neut Kolfchoten, and Rob C. Aalberse

Immunogenetics

4282 A Novel Peptide Mimotope Identified As a Potential Immunosuppressive Vaccine for Organ Transplantation
Kuei-Chen Chiang, Yayoi Shimada, Toshiaki Nakano, Chia-Yun Lai, Li-Wen Hsu, Shigeru Goto, Naoya Ohnori, Kenji Mori, Takamitsu Miyagi, Seiji Kawamoto, Kazuhisa Ono, Chao-Long Chen, Takeshi Goto, and Shuji Sato

Host Defense

4289 Vitamin D-Directed Rheostatic Regulation of Monocyte Antibacterial Responses
John S. Adams, Songyang Ren, Philip T. Liu, Rene F. Chun, Venu Lagisbetty, Adrian F. Gombart, Niels Borregaard, Robert L. Modlin, and Martin Hewison

4296 TLR-Induced Local Metabolism of Vitamin D₃ Plays an Important Role in the Diversification of Adaptive Immune Responses
Elena Yu Enioutina, Dinaa Bareyze, and Raymond A. Daynes

4306 Early NK Cell-Derived IFN-γ Is Essential to Host Defense in Neutropenic Invasive Aspergillosis
Stacy J. Park, Molly A. Hughes, Marie Burdick, Robert M. Strieter, and Borna Mehrad

4313 Combined Effect of Antiretroviral Therapy and Blockade of IDO in SIV-Infected Rhesus Macaques
Adriano Boasso, Monica Vaccari, Dietmar Fuchs, Andrew W. Hardy, Wen-Po Tsai, Elzbieta Tryniszewska, Gene M. Shearer, and Genevieve Franchini

4321 Clathrin- and Dynamin-Dependent Endocytic Pathway Regulates Muramyl Dipeptide Internalization and NOD2 Activation
Noemi Marina-Garcia, Luigi Franchi, Yun-Gi Kim, Yonjun Hu, David E. Smith, Geert-Jan Boons, and Gabriel Núñez

4328 Immunologic and Therapeutic Synergy of IL-27 and IL-2: Enhancement of T Cell Sensitization, Tumor-Specific CTL Reactivity and Complete Regression of Disseminated Neuroblastoma Metastases in the Liver and Bone Marrow

4339 Interactions between Human NK Cells and Macrophages in Response to Salmonella Infection
Nicolas Lapaque, Thierry Walzer, Stéphane Méresse, Eric Vivier, and John Trousdale

4349 The Receptor for Advanced Glycation End Products Impairs Host Defense in Pneumococcal Pneumonia
Marieke A. D. van Zoelen, Marcel Schouten, Alex F. de Vos, Sandrine Florquin, Joost C. M. Meijers, Peter P. Nawroth, Angelika Bierhaus, and Tom van der Poll
Airway and Lung Pathology Due to Mucosal Surface Dehydration in β-Epithelial Na⁺ Channel-Overexpressing Mice: Role of TNF-α and IL-4Rα Signaling, Influence of Neonatal Development, and Limited Efficacy of Glucocorticoid Treatment


Complement Factor H, a Marker of Self Protects against Experimental Autoimmune Encephalomyelitis

Mark R. Griffiths, Jim W. Neal, Marc Fontaine, Trina Das, and Philippe Gasque

Activation of Microglia by Amyloid β Requires P2X7 Receptor Expression

Juana M. Sanz, Paola Chiozzi, Davide Ferrari, Marilena Colaianni, Marco Idzko, Simonetta Falzoni, Renato Fellin, Luigia Trabacce, and Francesco Di Virgilio

Bacterial DNA Activates Endothelial Cells and Promotes Neutrophil Adherence through TLR9 Signaling

Dris El Kebir, Levente József, Wanling Pan, Lili Wang, and János G. Filep

Isoforms of Vitamin E Have Opposing Immunoregulatory Functions during Inflammation by Regulating Leukocyte Recruitment

Sergei Berdnikovs, Huan Abdala-Valencia, Christine McCary, Michelle Sonand, Rokeisha Cole, Alex Garcia, Paul Bryce, and Juan M. Cook-Mills

Mechanism of the Salutary Effects of Estrogen on Kupffer Cell Phagocytic Capacity following Trauma-Hemorrhage: Pivotal Role of Akt Activation

Chi-Hsun Hsieh, Eike A. Nickel, Jianguo Chen, Martin G. Schwacha, Maskwoo A. Choudry, Kirby I. Bland, and Irshad H. Chaudry

M2 Macrophages Phagocytose Rituximab-Opsonized Leukemic Targets More Efficiently than M1 Cells In Vitro

Marzia Leidi, Elisa Gotti, Luca Bologna, Elena Miranda, Monica Rimoldi, Antonio Sica, Massimo Roncalli, Giuseppe A. Palumbo, Martino Introna, and Josep G. Filep

The Presence of a Matrix-Derived Neutrophil Chemoattractant in Bronchiolitis Obliterans Syndrome after Lung Transplantation

Matthew T. Hardison, F. Shawn Galin, Christopher E. Calderon, Uros V. Djekic, Suzanne B. Parker, Keith M. Wille, Patricia L. Jackson, Robert A. Oster, K. Randall Young, J. Edwin Blalock, and Amit Gaggar

Advanced Intercross Line Mapping Suggests That Nef1 (Ean6) Regulates Severity in an Animal Model of Guillain-Barré Syndrome

Alexander Huberle, Amennai Daniel Beyeen, Johan Ockinger, Miriam Ayturan, Maja Jagodic, Katrien L. de Graaf, Nicolas Fisolo, Monica Marta, Peter Olufson, Malin Hultqvist, Rikard Holmåhl, Tomas Olson, and Robert Weisert

Subtle Affinity-Enhancing Mutations in a Myelin Oligodendrocyte Glycoprotein-Specific TCR Alter Specificity and Generate New Self-Reactivity

Akshata Udyavar, Rajbhekar Alli, Phuong Nguyen, Lesley Baker, and Terrence L. Geiger

CXCR4/CXCL12 Hyperexpression Plays a Pivotal Role in the Pathogenesis of Lupus

Andrew Wang, Anna-Marie Fairhurst, Katalin Tus, Sreewada Subramanian, Yang Liu, Fangming Lin, Peter Igarashi, Xin J. Zhou, Frederic Batteux, Donald Wong, Edward K. Wakeland, and Chandra Mohan

Circulating Monocytes in HIV-1-Infected Viremic Subjects Exhibit an Antiapoptosis Gene Signature and Virus- and Host-Mediated Apoptosis Resistance

Malavika S. Giri, Michael Nebzhyn, Andrea Raymond, Bethchab Gebenge, Aidan Hancock, Shenoa Creer, Calen Nicols, Malik Yousef, Andrea S. Foulkes, Karem Mounzer, Jane Shull, Guido Silvestri, Jay Kostman, Ronald G. Callman, Louise Shovee, and Luis J. Montaner

TLR3 Ligand Induces NF-κB Activation and Various Fates of Multiple Myeloma Cells Depending on IFN-α Production

David Chiron, Catherine Pellat-Decencunck, Martine Amiot, Régis Bataille, and Gaëtan Jego
Transcriptional Modulation of the Immune Response by Peroxisome Proliferator-Activated Receptor-α Agonists in Autoimmune Disease
Anne R. Gocke, Rehana Z. Hussain, Yuhong Yang, Haiyan Peng, Jeffrey Weiner, Li-Hong Ben, Paul D. Drew, Olaf Stuve, Amy E. Lovett-Racke, and Michael K. Racke

CORRECTIONS

AUTHOR INDEX