IN THIS ISSUE

BRIEF REVIEWS

2477 MHC Class II Tetramers
Gerald T. Nepom

CUTTING EDGE

2483 Cutting Edge: The Role of IFN-α Receptor and MyD88 Signaling in Induction of IL-15 Expression In Vivo
Sara L. Colpitts, Thomas A. Stoklasek, Courtney R. Plumlee, Joshua J. Obar, Caiying Guo, and Leo Lefranc¸ois

2488 Cutting Edge: Paradoxical Roles of BST2/Tetherin in Promoting Type I IFN Response and Viral Infection
Melissa Suwelack, Yaming Wang, Susan Gilfillan, Deborah J. Leuschow, and Marco Colonna

2493 Cutting Edge: The “Death” Adaptor CRADD/RAIDD Targets BCL10 and Suppresses Agonist-Induced Cytokine Expression in T Lymphocytes
Qing Lin, Yan Liu, Daniel J. Moore, Sydney K. Elizer, Ruth A. Veach, Jacek Hawiger, and H. Earl Riley

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

2499 A Novel NKR-P1Bbright NK Cell Subset Expresses an Activated CD25⁺CX₃CR1⁺CD62L⁻CD11b⁻CD27⁻ Phenotype and Is Prevalent in Blood, Liver, and Gut-Associated Lymphoid Organs of Rats
Marit Inngjerdingen, Lise Kveberg, and John T. Vaage

2509 Recognition and Prevention of Tumor Metastasis by the NK Receptor NKp46/NCR1
Ariella Glasner, Hormas Ghadially, Chamutal Gur, Noa Stanitsky, Pinchas Tsukerman, Jonatan Enk, and Ofer Mandelboim

2516 Derivation and Maintenance of Virtual Memory CD8 T Cells
Adovi D. Akue, June-Yong Lee, and Stephen C. Jameson

The Development of Colitogenic CD4+ T Cells Is Regulated by IL-7 in Collaboration with NK Cell Function in a Murine Model of Colitis
Osamu Yamaji, Takashi Nagasumi, Teruji Totsuka, Michio Onizawa, Masahiro Suzuki, Naoto Tsuge, Atsuhiko Hasegawa, Ryutichi Okamoto, Kiichiro Tsuchiya, Tetsuya Nakamura, Hisashi Arase, Takanori Kanai, and Mamoru Watanabe

Frequency of Epitope-Specific Naive CD4+ T Cells Correlates with Immunodominance in the Human Memory Repertoire
William W. Kwok, Venus Tan, Laurie Gillette, Christopher T. Littell, Michele A. Solcis, Rebecca B. LaFond, Junhao Yang, Eddie A. James, and Jonathan H. DeLong

IκB Kinase β Is Required for Activation of NF-κB and AP-1 in CD3/CD28-Stimulated Primary CD4+ T Cells
Elisa Lupino, Cristina Ramondetti, and Marco Piccinini

Germline Deletion of IgH 3' Regulatory Region Elements hs 5, 6, 7 (hs5–7) Affects B Cell-Specific Regulation, Rearrangement, and Insulation of the IgH Locus

E3 Ubiquitin Ligase Tripartite Motif 38 Negatively Regulates TLR-Mediated Immune Responses by Proteasomal Degradation of TNF Receptor-Associated Factor 6 in Macrophages
Wei Zhao, Lijuan Wang, Meng Zhang, Chao Yuan, and Chengjiang Gao

Selective Dependence of H2-M3–Restricted CD8 Responses on IL-15
Jürgen R. Müller, Thomas A. Waldmann, and Sigrid Dubois

Chronic Shift-Lag Alters the Circadian Clock of NK Cells and Promotes Lung Cancer Growth in Rats
Ryan W. Logan, Changqing Zhang, Sengottuvelan Murugan, Stephanie O'Connell, Dale Levitt, Alan M. Rosenwasser, and Dipak K. Sarkar

Adiponectin Induces Dendritic Cell Activation via PLCγ/JNK/NF-κB Pathways, Leading to Th1 and Th17 Polarization
Mi Young Jung, Han-Soo Kim, Hye-Jin Hong, Byung-Soo Youn, and Tae Sung Kim

Midkine Inhibits Inducible Regulatory T Cell Differentiation by Suppressing the Development of Tolerogenic Dendritic Cells
Yoshihumi Sonobe, Hua Li, Shijie Jin, Satoshi Kishida, Kenji Kadomatsu, Hideyuki Takeuchi, Tetsuya Mizuno, and Akio Suzumura

TREM2 and β-Catenin Regulate Bone Homeostasis by Controlling the Rate of Osteoclastogenesis
Karel Otero, Masahiro Shinohara, Haibo Zhao, Marina Celli, Susan Gilfillan, Angela Colucci, Roberta Faccio, F. Patrick Ross, Steve L. Teitelbaum, Hiroshi Takayanagi, and Marco Colonna

Alternaria Induces STAT6-Dependent Acute Airway Eosinophilia and Epithelial FIZZ1 Expression That Promotes Airway Fibrosis and Epithelial Thickness
Taylor A. Doherty, Naseem Khorram, Kotaro Sugimoto, Dean Sheppard, Peter Rosenthal, Jae Youn Cho, Alexa Pham, Marina Miller, Michael Croft, and David H. Broide

Cellular and Molecular Requirements for Rejection of B16 Melanoma in the Setting of Regulatory T Cell Depletion and Homeostatic Proliferation
Justin Kline, Long Zhang, Lauren Battaglia, Kenneth S. Cohen, and Thomas F. Gajewski

Germinal Center Alloantibody Responses Are Mediated Exclusively by Indirect-Pathway CD4 T Follicular Helper Cells

Characterization of a PIAS4 Homologue from Zebrafish: Insights into Its Conserved Negative Regulatory Mechanism in the TRIF, MAVS, and IFN Signaling Pathways during Vertebrate Evolution
Ran Xiang, Li Nie, Li-xin Xiang, and Jian-zhong Shao
The Tick Salivary Protein Sialostatin L Inhibits the Th9-Derived Production of the Asthma-Promoting Cytokine IL-9 and Is Effective in the Prevention of Experimental Asthma
Helena Horka, Valerie Staudt, Matthias Klein, Christian Taube, Sebastian Reuter, Nina Dehzad, John F. Andersen, Jan Kopecky, Hansjörg Schild, Michalis Kotsyfakis, Markus Hoffmann, Bastian Gerlitzki, Michael Stassen, Tobias Bopp, and Edgar Schmitt

JAB1 Is Essential for B Cell Development and Germinal Center Formation and Inversely Regulates Fas Ligand and Bcl6 Expression
Selina Sitte, Joachim Gläsner, Julia Jellusova, Florian Weisel, Martina Panattoni, Ruggero Pardi, and André Gesner

Targeting TNF-α to Neovangiogenic Vessels Enhances Lymphocyte Infiltration in Tumors and Increases the Therapeutic Potential of Immunotherapy
Arianna Calcinoitrio, Matteo Grioni, Elena Jachetti, Flavio Curnis, Anna Mondino, Giorgio Parmiani, Angelo Corti, and Matteo Bellone

Modulation of Antigen Presentation and B Cell Receptor Signaling in B Cells of Beige Mice
Priyadarshini Chatterjee, Ritesh Kumar Tiwari, Satyajit Rath, Vineeta Bal, and Anna George

Innate NK Cells and Macrophages Recognize and Reject Allogeneic Nonself In Vivo via Different Mechanisms
Wentao Liu, Xiang Xiao, Gulcin Demirci, Joren Madsen, and Xian C. Li

Three Novel Acetylation Sites in the Foxp3 Transcription Factor Regulate the Suppressive Activity of Regulatory T Cells
Hye-Sook Kwon, Hyung W. Lim, Jessica Wu, Martina Schnölzer, Eric Verdin, and Melanie Ott

A New Hypersensitive Site, HS10, and the Enhancers, E3' and Ed, Differentially Regulate Igk Gene Expression
Xiaorong Zhou, Yongui Xiang, Xiaoling Ding, and William T. Garrard

Tyrosine Phosphorylation-Independent Regulation of Lipopolysaccharide-Mediated Response by the Transmembrane Adaptor Protein LAB
Minghua Zhu, Deirdre M. Fuller, Chih-uen Ou-Yang, Sarah A. Sullivan, and Weiguo Zhang

The Impact of a Large and Frequent Deletion in the Human TCR β Locus on Antiviral Immunity
Rebekah M. Brennan, Jan Petersen, Michelle A. Neller, John J. Miles, Jacqueline M. Burrows, Corey Smith, James McCluskey, Rajiv Khanna, Jamie Rossjohn, and Scott R. Burrows

Class B Scavenger Receptor Types I and II and CD36 Targeting Improves Sepsis Survival and Acute Outcomes in Mice

Hapivirins and Diprovirins: Novel θ-Defensin Analogs with Potent Activity against Influenza A Virus
Mona Doss, Piotr Ruchala, Tesfaldet Tecele, Donald Gantz, Anamika Verma, Alex Harshorn, Erika C. Crouch, Hai Luong, Ewa D. Micewicz, Robert I. Lehrer, and Kevan L. Hartshorn

The Adaptor Protein SLP-76 Regulates HIV-1 Release and Cell-to-Cell Transmission in T Cells
Tirumuru Nagaraja, Appakkudal R. Anand, Helong Zhao, and Ramesh K. Ganju

Suppression of the NF-κB Pathway by Diesel Exhaust Particles Impairs Human Antimycobacterial Immunity
Srijata Sarkar, Youngmia Song, Somak Sarkar, Howard M. Kipen, Robert J. Laumbach, Junfeng Zhang, Pamela A. Ohman Strickland, Carol R. Gardner, and Stephan Schwander
Human Cytomegalovirus UL40 Signal Peptide Regulates Cell Surface Expression of the NK Cell Ligands HLA-E and gpUL18
Virginie Prod'homme, Peter Tomasec, Charles Cunningham, Marius K. Lemberg, Richard J. Stanton, Brian P. McSharry,
Eddie C. Y. Wang, Simone Caff, Bruno Martoglio, Andrew J. Davison, Véronique M. Braud, and Gavin W. G. Wilkinson

Downregulation of the Na/K-ATPase Pump by Leptospiral Glycolipoprotein Activates the NLRP3 Inflammasome
Sonia Lacroix-Lamand, Martine Fantan d'Andon, Eric Michel, Guenn Rater, Dana J. Philpott, Stephen E. Girardin,
Ivo G. Boneca, Alain Vandewalle, and Catherine Werti

Impaired NLRP3 Inflammasome Function in Elderly Mice during Influenza Infection Is Rescued by Treatment with Nigericin
Heather W. Stout-Delgado, Sarah E. Vaughan, Anushree C. Shirali, Richard J. Jaramillo, and Kevin S. Harrod

A TRIF-Independent Branch of TLR3 Signaling
Michifumi Yamashita, Saurabh Chattopadhyay, Volter Fenster, Ying Zhang, and Ganes C. Sen

Maximal Adjuvant Activity of Nasally Delivered IL-1α Requires Adjuvant-Responsive CD11c⁺ Cells and Does Not Correlate with Adjuvant-Induced In Vivo Cytokine Production
Afton L. Thompson, Brandi T. Johnson, Gregory D. Sempowski, Michael D. Gunn, Baidong Hou, Anthony L. DeFranco,
and Herman F. Staats

TLR4-Mediated AKT Activation Is MyD88/TRIF Dependent and Critical for Induction of Oxidative Phosphorylation and Mitochondrial Transcription Factor A in Murine Macrophages
Christian P. Bauerfeld, Ruchi Rastogi, Gaila Pirockinaite, Icksoo Lee, Maik Hüttemann, Bobby Monks, Morris J. Birnbaum,
Luigi Franchi, Gabriel Nuñez, and Lobelia Samavati

Factor VII-Activating Protease Is Activated in Multiple Trauma Patients and Generates Anaphylatoxin C5a
Sandip M. Kanse, Andrea Gallemmüller, Sacha Zeerleder, Femke Stephan, Olivier Rainou, Stephanie Denk,
Michael Etscheid, Guenter Lochnt, Marcus Krueger, and Markus Huber-Lang

Significant Role of IL-1 Signaling, but Limited Role of Inflammasome Activation, in Oviduct Pathology during Chlamydia muridarum Genital Infection
Uma M. Nagarajan, James D. Sikes, Laxmi Yeruva, and Daniel Prantner

Stromal TIMP3 Regulates Liver Lymphocyte Populations and Provides Protection against Th1 T Cell-Driven Autoimmune Hepatitis
Aditya Murthy, Yang Washington Shao, Virginie Defamie, Christopher Wedeles, David Smookler, and Rama Khokha

Analysis of NLRP3 in the Development of Allergic Airway Disease in Mice
Irving C. Allen, Corey M. Jansia, Justin E. Wilson, Erin M. Tekeppe, Xiaoyang Hua, Willie J. Brickey, Mildred Kwan,
Beverly H. Koller, Stephen L. Tilley, and Jenny P.-Y. Ting

Neonatal Rhinovirus Infection Induces Mucous Metaplasia and Airways Hyperresponsiveness
Dina Schneider, Jun Y. Hong, Antonia P. Popova, Emily R. Bowman, Maria J. Linn, Alan M. McLean, Ying Zhao,
Joanne Sonstein, J. Kelley Bentley, Jason B. Weinberg, Nicholas W. Lukacs, Jeffrey L. Curtis, Uma S. Sajjan,
and Marc B. Hershenson

Spatiotemporal Inhibition of Innate Immunity Signaling by the Tbc1d23 RAB-GAP
Lesly De Arras, Ivana V. Yang, Brad Lackford, David W. H. Riches, Rytis Prekeris, Jonathan H. Freedman,
David A. Schwartz, and Scott Alper

CLINICAL IMMUNOLOGY

Removal of Syndecan-1 Promotes TRAIL-Induced Apoptosis in Myeloma Cells
Yung-Hsuan Wu, Chen-Ying Yang, Wen-Li Chien, Kuo-I Lin, and Ming-Zong Lai
CORRECTIONS
2922 Correction: Quantifying Antigen-Specific CD4 T Cells during a Viral Infection: CD4 T Cell Responses Are Larger Than We Think
Daniel S. McDermott and Steven M. Varga

2924 AUTHOR INDEX