This information is current as of April 15, 2017.

**Subscription**  
Information about subscribing to *The Journal of Immunology* is online at:  
http://jimmunol.org/subscription

**Permissions**  
Submit copyright permission requests at:  
http://www.aai.org/About/Publications/JI/copyright.html

**Email Alerts**  
Receive free email-alerts when new articles cite this article. Sign up at:  
http://jimmunol.org/alerts
IN THIS ISSUE

PILLARS OF IMMUNOLOGY

3 A New Mechanism of Gene Regulation Mediated by Noncoding RNA
Martín Turner and Peter D. Katsikis

Gray Shaw and Robert Kamen

BRIEF REVIEWS

15 Autophagy: An Emerging Immunological Paradigm
Vojtich Deretic

CUTTING EDGE

23 Cutting Edge: MicroRNA Regulation of Macrophage Fusion into Multinucleated Giant Cells
James R. Sissons, Jacques J. Peschon, Frank Schmitz, Rosa Suen, Mark Gilchrist, and Alan Aderem

28 Cutting Edge: IL-2 Signals Determine the Degree of TCR Signaling Necessary To Support Regulatory T Cell Proliferation In Vivo

33 Cutting Edge: TNF Receptor-Associated Factor 4 Restricts IL-17–Mediated Pathology and Signaling Processes
Jarod A. Zepp, Caiini Liu, Wen Qian, Ling Wu, Muhammet F. Gulen, Zizhen Kang, and Xiaoxia Li

B and T Lymphocyte Attenuator Mediates Inhibition of Tumor-Reactive CD8+ T Cells in Patients After Allogeneic Stem Cell Transplantation

Transcriptional Regulation of Murine IL-33 by TLR and Non-TLR Agonists

Differential Requirement of RasGRP1 for γδ T Cell Development and Activation
Yong Chen, Xinxin Ci, Balachandra Gorenla, Sarah A. Sullivan, James C. Stone, Weiguo Zhang, Pablo Pereira, Jianxin Lu, and Xiaofeng Zhong

Induction of Prolonged Asthma Tolerance by IL-10–Differentiated Dendritic Cells: Differential Impact on Airways Hyperresponsiveness and the Th2 Immuno-inflammatory Response
Aarti Nayyar, Wojciech Denwicki, Hui Huang, Meiping Lu, Xiaobei Zhang, and John R. Gordon

Myeloid Dendritic Cells from B6.NZM Sle1/Sle2/Sle3 Lupus-Prone Mice Express an IFN Signature That Precedes Disease Onset
Uma Sriram, Linda Varghese, Heather L. Bennett, Neelakshi R. Jog, Debra K. Shivers, Yue Ning, Edward M. Behrens, Roberto Caricchi, and Stefania Gallucci

Fcy Receptor IIIb Strongly Regulates Fcy Receptor-Facilitated T Cell Activation by Dendritic Cells
Nadine van Montfoort, Peter A. C. ‘t Hoen, Sara M. Mangbo, Marcel G. M. Camps, Peter Boross, Cornelis J. M. Melief, Ferry Ossendorp, and J. Sjef Verbeek

The Role of Sphingosine-1-Phosphate Transporter Spons2 in Immune System Function
Anastasia Nijnik, Simon Clare, Christine Hale, Jing Chen, Claire Raisen, Lynda Mottram, Mark Lucas, Joanne Estabel, Edward Ryder, Hiber Adisus, Sanger Mouse Genetics Project, Niels C. Adams, Ramiro Ramirez-Solis, Jacqueline K. White, Karen P. Steel, Gordon Dougan, and Robert E. W. Hancock

Glucocorticoids Relieve Collectin-Driven Suppression of Apoptotic Cell Uptake in Murine Alveolar Macrophages through Downregulation of SIRPα
Alexandra L. McCubrey, Joanne Sonstein, Theresa M. Ames, Christine M. Freeman, and Jeffrey L. Curtis

The Aryl Hydrocarbon Receptor Modulates Acute and Late Mast Cell Responses
Riccardo Sibilano, Barbara Frossi, Marco Calvaruso, Luca Danelli, Elena Betto, Alessandra Dall’Agnese, Claudio Tripodo, Mario P. Colombo, Carlo E. Pucillo, and Giorgia Gri

Pulmonary CCL18 Recruits Human Regulatory T Cells
Cécile Chenivesse, Ying Chang, Imane Azzouzi, Saliba Ait Yahia, Olivier Morales, Coline Plé, Arnaud Fousat, André-Bernard Tonnel, Nadira Delhem, Hans Yisel, Han Vorm, Benoît Wallaert, and Anne Tsicopoulos

Dendritic Cell-Specific Transcript: Dendritic Cell Marker and Regulator of TLR-Induced Cytokine Production
Saartje Hontelez, Marleen Ansems, Nina Karthaus, Maaike W. Looman, Vassilis Triantis, and Gosse J. Adema

α-1 Antitrypsin Promotes Semimature, IL-10–Producing and Readily Migrating Tolerogenic Dendritic Cells
Eyal Ozeri, Mark Mizrahi, Galit Shabat, and Eli C. Lewis

GITR Ligand Provided by Thrombopoietic Cells Inhibits NK Cell Antitumor Activity
Theresa Placke, Helmut R. Sá lith, and Hans-Georg Kopp

IL-2 Requirement for Human Plasma Cell Generation: Coupling Differentiation and Proliferation by Enhancing MAPK–ERK Signaling
Simon Le Gallou, Gersende Caron, Céline Delaloy, Delphine Rosille, Karin Tarte, and Thierry Fest

Purinergic P2X7 Receptor Drives T Cell Lineage Choice and Shapes Peripheral γδ Cells
Michela Frascoli, Jessica Marcandalli, Ursula Schenk, and Fabio Grassi
B7-H1, Which Represses EBV-Immortalized B Cell Killing by Autologous T and NK Cells, Is Oppositely Regulated by c-Myc and EBV Latency III Program at Both mRNA and Secretory Lysosome Levels

Stephanie Durand-Pantex, Mona Farhat, Ibtissam Youlyouz-Marfak, Pauline Rouaud, Catherine Ouk-Martin, Amandine David, Nathalie Faumont, Jean Feuillard, and Chantal Jayat-Vignoles

Constitutive Plasmacytoid Dendritic Cell Migration to the Splenic White Pulp Is Cooperatively Regulated by CCR7- and CXCR4-Mediated Signaling

Eiji Umemoto, Kazuhiro Otani, Takashi Ikeda, Noel Verjan Garcia, Haruko Hayasaka, Zhongbin Bai, Myoung Ho Jang, Toshiyuki Tanaka, Takashi Nagasawa, Koichi Ueda, and Masayuki Miyasaka

The Endothelial Antigen ESAM Monitors Hematopoietic Stem Cell Status between Quiescence and Self-Renewal

Takao Sudo, Takafumi Yokota, Kenji Orii, Yusuke Satoh, Tatsuki Sugiyama, Tatsuro Ishida, Hirohiko Shibayama, Sachiko Ezoe, Natsuko Fujita, Hirokazu Tanaka, Tetsuo Maeda, Takashi Nagasawa, and Yuzuru Kanakura

Identification of Resting and Type I IFN-Activated Human NK Cell miRNomes Reveals MicroRNA-378 and MicroRNA-30e as Negative Regulators of NK Cell Cytotoxicity

Pin Wang, Yan Gu, Qian Zhang, Yanmei Han, Jin Hou, Li Lin, Cong Wu, Yan Bao, Xiaoping Su, Minghong Jiang, Qingqing Wang, Nan Li, and Xuetao Cao

Donor B Cells in Transplants Augment Clonal Expansion and Survival of Pathogenic CD4+ T Cells That Mediate Autoimmune-like Chronic Graft-versus-Host Disease

James S. Young, Tao Wu, Yuhong Chen, Dongchang Zhao, Hongjun Liu, Tangsheng Yi, Heather Johnston, Jeremy Racine, Xiaofan Li, Audrey Wang, Jian Tao, and Defu Zeng

Comprehensive Analysis of CD4+ T Cells in the Decision between Tolerance and Immunity In Vivo Reveals a Pivotal Role for ICOS

Timo Lischke, Anika Hegemann, Stephanie Gurka, Dana Yu Van, Yvonne Burmeister, Kong-Peng Lam, Olivia Kershaw, Hans-Joachim Mollenkopf, Hans Werner Mages, Andreas Huber, and Richard A. Kroczek

Crystal Structure of Human RANKL Complexed with Its Decoy Receptor Osteoprotegerin

Xudong Luan, Qingyu Lu, Yinian Jiang, Senyan Zhang, Qing Wang, Huibui Yuan, Wenming Zhao, Jiawei Wang, and Xinquan Wang

BLIMP-1 and STAT3 Counterregulate MicroRNA-21 during Plasma Cell Differentiation

Nicholas A. Barnes, Sophie Stephenson, Mario Coco, Reuben M. Tooze, and Gina M. Doody

Classical Ataxia Telangiectasia Patients Have a Congenitally Aged Immune System with High Expression of CD95

Ellen F. Carney, Venkataramanan Srinivasan, Paul A. Moss, and A. Malcolm Taylor

Vasoactive Intestinal Peptide Downregulates Proinflammatory TLRs While Upregulating Anti-Inflammatory TLRs in the Infected Cornea

Xiaoyu Jiang, Sharon A. Mc Clellan, Ronald P. Barrett, Yunfan Zhang, and Linda D. Hazlett

Hepatitis B Virus-Induced Calreticulin Protein Is Involved in IFN Resistance

Xin Yue, Hui Wang, Fanpeng Zhao, Shi Liu, Jianguo Wu, Wendan Ren, and Ying Zhu

IL-33 Priming Regulates Multiple Steps of the Neutrophil-Mediated Anti-Candida albicans Response by Modulating TLR and Dectin-1 Signals

Honggea T. Le, Vuvi G. Tran, Wonyoung Kim, Juyang Kim, Hong R. Cho, and Byungsuk Kwon

Role of M2b Macrophages in the Acceleration of Bacterial Translocation and Subsequent Sepsis in Mice Exposed to Whole Body [137Cs] Gamma-Irradiation

Makiko Kobayashi, Kiwamu Nakamura, Michael Cornforth, and Fujio Suzuki
Cathelicidin-Related Antimicrobial Peptide Is Required for Effective Lung Mucosal Immunity in Gram-Negative Bacterial Pneumonia
Melissa A. Kovach, Megan N. Ballinger, Michael W. Newstead, Xiaying Zeng, Urvashi Bhan, Fu-ibin Yu, Bethany B. Moore, Richard L. Gallo, and Theodore J. Standiford

Relative Contributions of Dectin-1 and Complement to Immune Responses to Particulate β-Glucans
Haibin Huang, Gary R. Ostroff, Chrono K. Lee, Sarika Agarwal, Sanjay Ram, Peter A. Rice, Charles A. Specht, and Stuart M. Levitz

INFLAMMATION

Gadolinium Compounds Signaling through TLR 4 and TLR 7 in Normal Human Macrophages: Establishment of a Proinflammatory Phenotype and Implications for the Pathogenesis of Nephrogenic Systemic Fibrosis
Peter J. Wermuth and Sergio A. Jimenez

Bacterial RNA Mediates Activation of Caspase-1 and IL-1β Release Independently of TLRs 3, 7, 9 and TRIF but Is Dependent on UNC93B
Tatjana Eigenbrod, Luigi Franchi, Raúl Muñoz-Planillo, Carsten J. Kirschning, Marina A. Freudenberg, Gabriel Náñez, and Alexander Dalpke

Differing Requirements for CCR4, E-Selectin, and α4β1 for the Migration of Memory CD4 and Activated T Cells to Dermal Inflammation
Ahmed Gehad, Nadia A. Al-Banna, Maria Vaci, Andrew C. Iseikut, Karkada Mohan, Markus Latta, and Thomas B. Iseikut

B7-H3 Participates in the Development of Experimental Pneumococcal Meningitis by Augmentation of the Inflammatory Response via a TLR2-Dependent Mechanism
Xuqin Chen, Edel M. Quinn, Hong Ni, Jian Wang, Siobhan Blakson, H. Paul Redmond, Jiang Huai Wang, and Xing Feng

TLR Signaling Prevents Hyperoxia-Induced Lung Injury by Protecting the Alveolar Epithelium from Oxidant-Mediated Death
Megan N. Ballinger, Michael W. Newstead, Xiaying Zeng, Urvashi Bhan, Jeffrey C. Horowitz, Bethany B. Moore, David J. Pinsky, Richard A. Flavell, and Theodore J. Standiford

α-Enolase Expressed on the Surfaces of Monocytes and Macrophages Induces Robust Synovial Inflammation in Rheumatoid Arthritis
Seyeon Bae, Hyemin Kim, Naeun Lee, Cheolhee Won, Hang-Rae Kim, Young-il Huang, Yeong Wook Song, Jae Seung Kang, and Wang Jae Lee

Proinflammatory Mediators Disrupt Glucose Homeostasis in Airway Surface Liquid

Neutrophil Cerebrovascular Transmigration Triggers Rapid Neurotoxicity through Release of Proteases Associated with Decondensed DNA
Charlotte Allen, Peter Thornton, Adam Denes, Barry W. McColl, Adam Pierozynski, Marc Monestier, Emmanuel Pinteaux, Nancy J. Rothwell, and Stuart M. Allan

Milk Fat Globule-Epidermal Growth Factor-Factor 8 Attenuates Neutrophil Infiltration in Acute Lung Injury via Modulation of CXCR2
Monowar Aziz, Akihisa Matsuda, Weng-Lang Yang, Asha Jacob, and Ping Wang

Full-Length IL-33 Promotes Inflammation but not Th2 Response In Vivo in an ST2-Independent Fashion

Retinoid X Receptor Agonists Impair Arterial Mononuclear Cell Recruitment through Peroxisome Proliferator-Activated Receptor-γ Activation
Maria-Jesus Sanz, Fernando Alberto, Eduardo Otero, Marina Juez, Estebar J. Morcillo, and Laura Piqueruas
425 CD8⁺ T Cells Suppress Viral Replication in the Cornea but Contribute to VEGF-C–Induced Lymphatic Vessel Genesis
Christopher D. Conrady, Min Zheng, Donald U. Stone, and Daniel J. J. Carr

433 Mitochondrial Transcription Factor A Serves as a Danger Signal by Augmenting Plasmacytoid Dendritic Cell Responses to DNA
Mark W. Julian, Guohong Shao, Shengying Bao, Daren L. Knoell, Tracey L. Papenfuss, Zachary C. VanGundy, and Elliott D. Crouser

444 Tumor-Associated Microglia/Macrophages Enhance the Invasion of Glioma Stem-like Cells via TGF-β1 Signaling Pathway
Xian-zong Ye, Sen-lin Xu, Yan-hong Xin, Shi-cang Yu, Yi-fang Ping, Lu Chen, Hua-liang Xiao, Bin Wang, Liang Yi, Qing-liang Wang, Xue-feng Jiang, Lang Yang, Peng Zhang, Cheng Qian, You-hong Cui, Xia Zhang, and Xiu-wu Bian

454 Zinc Supplementation during Pregnancy Protects against Lipopolysaccharide-Induced Fetal Growth Restriction and Demise through Its Anti-inflammatory Effect
Yuan-Hua Chen, Mei Zhao, Xue Chen, Ying Zhang, Hua Wang, Ying-Ying Huang, Zhen Wang, Zhi-Hui Zhang, Cheng Zhang, and De-Xiang Xu

CLINICAL IMMUNOLOGY

464 CD8⁺ Foxp3⁺ Regulatory T Cells Are Induced during Graft-versus-Host Disease and Mitigate Disease Severity
Amy J. Beres, Dipica Haribhai, Alexandra C. Chadwick, Patrick J. Gonyo, Calvin B. Williams, and William R. Drobsky

475 TLR5, a Novel and Unidentified Inflammatory Mediator in Rheumatoid Arthritis that Correlates with Disease Activity Score and Joint TNF-α Levels

CORRECTIONS

484 Correction: Natural IgM Anti-Leukocyte Autoantibodies Attenuate Excess Inflammation Mediated by Innate and Adaptive Immune Mechanisms Involving Th-17
Peter I. Lobo, Amandeep Bajwa, Kailo H. Schlegel, John Vengal, Sang J. Lee, Liping Huang, Hong Ye, Umesh Deshmukh, Tong Wang, Hong Pei, and Mark D. Okusa

485 AUTHOR INDEX

487 INFORMATION FOR AUTHORS