This information is current as of April 22, 2017.

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

**Permissions**  
Submit copyright permission requests at:  
[http://www.aai.org/About/Publications/JI/copyright.html](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](http://jimmunol.org/alerts)
3729 IN THIS ISSUE

LETTERS TO THE EDITOR
3731 Comment on “Characterizing the N-Terminal Processing Motif of MHC Class I Ligands”
Camilo A. L. S. Colaco
3731 Response to Comment on “Characterizing the N-Terminal Processing Motif of MHC Class I Ligands”
Stefan Tenzer and Hansjörg Schild

BRIEF REVIEWS
3733 Macrophage Polarization in Bacterial Infections
Marie Benoit, Benoît Desnues, and Jean-Louis Mege

CUTTING EDGE
3741 Cutting Edge: Programmed Death-1 Up-Regulation Is Involved in the Attrition of Cytomegalovirus-Specific CD8+ T Cells in Acute Self-Limited Hepatitis B Virus Infection
Ji-Yuan Zhang, Zheng Zhang, Bo Jin, Shu-Ye Zhang, Chun-Bao Zhou, Jun-Liang Fu, and Fu-Sheng Wang
3745 Cutting Edge: Instructive Role of Peripheral Tissue Cells in the Imprinting of T Cell Homing Receptor Patterns
Fanny Edele, Rosalie Molenaar, Dominique Gütle, Jan C. Dudda, Thilo Jakob, Bernhard Homey, Reina Mebius, Mathias Hornef, and Stefan F. Martin
3750 Cutting Edge: Th1 Cells Facilitate the Entry of Th17 Cells to the Central Nervous System during Experimental Autoimmune Encephalomyelitis
Richard A. O’Connor, Catriona T. Prendergast, Catherine A. Sabatos, Clement W. Z. Lau, Melanie D. Leech, David C. Wraith, and Stephen M. Anderton
3755 Cutting Edge: Alum Adjuvant Stimulates Inflammatory Dendritic Cells through Activation of the NALP3 Inflammasome
Mirjam Kool, Virginie Petrilli, Thibaut De Smedt, Aline Rolaz, Hamida Hammad, Menny van Nimwegen, Ingrid M. Bergen, Rosa Castillo, Bart N. Lambrecht, and Jürg Tschopp

Resistin Inhibits Essential Functions of Polymorphonuclear Leukocytes
Gerald Cohen, Dalibor Ilic, Jana Raupachova, and Walter H. Hörl

Characterization of a Novel Nonclassical T Cell Clone with Broad Reactivity against Human Renal Cell Carcinomas
Qiong J. Wang, Ken-ichi Hanada, and James C. Yang

Role of β-Catenin in B Cell Development and Function
Qing Yu, William J. Quinn III, Theresa Salay, Jenni E. Crowley, Michael P. Cancro, and Jyoti Misra Sen

TGF-β Utilizes SMAD3 to Inhibit CD16-Mediated IFN-γ Production and Antibody-Dependent Cellular Cytotoxicity in Human NK Cells
Rossana Trotta, Jessica Dal Col, Jianhua Yu, David Ciurliaiello, Brittany Thomas, Xiaoli Zhang, Jeffrey Allard II, Min Wei, Hsiaoyin Mao, John C. Byrd, Daniilo Perrotti, and Michael A. Caligiuri

Rab27a Regulates Exocytosis of Tertiary and Specific Granules in Human Neutrophils
M. Javier Herrero-Turrión, Jero Calafat, Hans Janssen, Mitsunori Fukuda, and Faustino Mollinedo

MyD88 Plays a Critical T Cell-Intrinsic Role in Supporting CD8 T Cell Expansion during Acute Lymphocytic Choriomeningitis Virus Infection
Adeeb H. Rahman, Weiguo Cui, Devon K. Taylor, Jidong Zhang, Daniel R. Goldstein, E. John Wherry, Susan M. Kaech, and Laurence A. Turka

Plasmacytoid Dendritic Cells Take Up Opsonized Antigen Leading to CD4+ and CD8+ T Cell Activation In Vivo
Pia Björck, Andreas Beilhack, Edward I. Herman, Robert S. Negrin, and Edgar G. Engleman

Cell Cycle-Related Acquisition of Cytotoxic Mediators Defines the Progressive Differentiation to Effector Status for Virus-Specific CD8+ T Cells
Misty R. Jenkins, Justine Mintern, Nicole L. La Gruta, Katherine Kedzierska, Peter C. Doherty, and Stephen J. Turner

Staphylococcus aureus-Induced Plasmacytoid Dendritic Cell Activation Is Based on an IgG-Mediated Memory Response
Marijo Parcina, Constanze Wendt, Friedrich Goetz, Rainer Zawatzky, Ulrich Zähringer, Klaus Heeg, and Isabelle Bekerelj-Ding

B Cell Receptor Affinity and B Cell Subset Identity Integrate to Define the Effectiveness, Affinity Threshold, and Mechanism of Anergy
Ramiro Diz, Suzanne K. McCray, and Stephen H. Clarke

TLR2 Expression in Astrocytes Is Induced by TNF-α- and NF-κB-Dependent Pathways
Nirmal K. Phulwani, Nilufar Eson, Mohsin Md. Md. Syed, and Tammy Kielian

IgE-Induced Mast Cell Survival Requires the Prolonged Generation of Reactive Oxygen Species
Laura M. Sly, Janet Kalesnikoff, Vivian Lam, Dana Wong, Christine Song, Stephanie Omeis, Karen Chan, Corinna W. K. Lee, Reuben P. Siraganian, Juan Rivera, and Gerald Krystal

High Sensitivity of Intestinal CD8+ T Cells to Nucleotides Indicates P2X7 as a Regulator for Intestinal T Cell Responses
Kirsten Heiss, Nathalie Jänsner, Birgit Mährnß, Valerie Schumacher, Friedrich Koch-Nolte, Friedrich Haag, and Hans-Willi Mittrücker

IL-12Rβ2 Promotes the Development of CD4+CD25+ Regulatory T Cells
Zhao Zhao, Shuo Yu, Denise C. Fitzgerald, Mohamed Elbehi, Bogoljub Ciciric, A. M. Rostami, and Guang-Xian Zhang

Cytokine-Mediated Inhibition of Fibrillar Amyloid-β Peptide Degradation by Human Mononuclear Phagocytes
Masaru Yamamoto, Tomomi Kiyoata, Shannon M. Walsh, Jianuo Liu, Jonathan Kipnis, and Tsuneza Ikezu

Fibroblast-Type Reticular Stromal Cells Regulate the Lymph Node Vasculature
Susan Ohyou, Eric H. Ekland, April C. Carpenter, Te-Chen Jenny Tzeng, Sha Tian, Michael Michaud, Joseph A. Madri, and Theresa T. Lu
3897 The Production of IL-10 by Human Regulatory T Cells Is Enhanced by IL-2 through a STAT5-Responsive Intronic Enhancer in the IL-10 Locus
Kazue Tsuji-Takayama, Masayo Suzuki, Mayuko Yamamoto, Akira Harashima, Ayumi Okochi, Toshio Otani, Toshiya Inoue, Akira Suginoto, Terumasa Toraya, Makoto Takeuchi, Fumiyuki Yasamaki, Shuji Nakamura, and Masayoshi Kihata

3906 CD8+ Th17 Mediate Costimulation Blockade-Resistant Allograft Rejection in T-bet-Deficient Mice
Bryna E. Burrell, Keri Gencsits, Guanyi Lu, Svetlana Grabauksiene, and D. Keith Bishop

3915 Cathelicidin Antimicrobial Peptides Inhibit Hyaluronan-Induced Cytokine Release and Modulate Chronic Allergic Dermatitis
Yasuhide Morioka, Kenshi Yamazaki, Donald Leung, and Richard L. Gallo

3923 CD137 Induces Proliferation of Murine Hematopoietic Progenitor Cells and Differentiation to Macrophages
Dongheng Jiang, Yifeng Chen, and Herbert Schwarz

3933 Pretransplant Infusion of Mesenchymal Stem Cells Prolongs the Survival of a Semiallogeneic Heart Transplant through the Generation of Regulatory T Cells
Federica Casiraghi, Nadia Azzollini, Paola Casis, Barbara Imberti, Marina Morigi, Daniela Cugini, Regiane Aparecida Cavinato, Marta Tedeschiini, Samantha Solino, Aurelio Sonzogni, Norberto Perico, Giuseppe Remuzzi, and Marina Neri

3947 Fibroblastic Reticular Cells Guide T Lymphocyte Entry into and Migration within the Splenic T Cell Zone
Marc Bajenoff, Nicolas Glachenhauz, and Ronald N. Germain

3955 Contrasting Responses of Lymphoid Progenitors to Canonical and Noncanonical Wnt Signals
Sachin Malhotra, Yoshibiro Baba, Karla P. Garret, Frank J. T. Staal, Rachel Gerstein, and Paul W. Kincade

3965 Transfer of T Cell Surface Molecules to Dendritic Cells upon CD4+ T Cell Priming Involves Two Distinct Mechanisms
Annette Busch, Thomas Quast, Sascha Keller, Waldemar Kolanus, Percy Knolle, Peter Altevogt, and Andreas Limmer

3974 Defects in Skin γδ T Cell Function Contribute to Delayed Wound Repair in Rapamycin-Treated Mice
Robyn E. Mills, Kristen R. Taylor, Katie Podzhivalova, Dianne B. McKay, and Julie M. Jameson

3984 Elevating Calcium in Th2 Cells Activates Multiple Pathways to Induce IL-4 Transcription and mRNA Stabilization
Liying Guo, Joseph F. Urban, Jinfang Zhu, and William E. Paul

3994 SAP Enables T Cells to Help B Cells by a Mechanism Distinct from Th Cell Programming or CD40 Ligand Regulation
Cris Kamperschroer, Deborah M. Roberts, Yongqing Zhang, Nan-ping Weng, and Susan L. Swain

4004 Functionally Competent Eosinophils Differentiated Ex Vivo in High Purity from Normal Mouse Bone Marrow
Kimberly D. Dyer, Jennifer M. Moser, Meggan Czapiga, Steven J. Siegel, Caroline M. Percopo, and Helene F. Rosenberg

4010 A Human Dendritic Cell Subset Receptive to the Venezuelan Equine Encephalitis Virus-Derived Replicon Particle Constitutively Expresses IL-32
Kevin P. Nishimoto, Amanda K. Laust, and Edward L. Nelson

4019 Cholera Toxin B Accelerates Disease Progression in Lupus-Prone Mice by Promoting Lipid Raft Aggregation
Guo-Min Deng and George C. Tsokos

4027 Linked Suppression across an MHC-Mismatched Barrier in a Miniature Swine Kidney Transplantation Model
Adam D. Griesemer, John C. LaMattina, Masayoshi Okumi, Justin D. Etter, Akira Shimizu, David H. Sachs, and Kazuhiko Yamada

4037 Involvement of LEK1 in Dendritic Cell Regulation of T Cell Immunity against Chlamydia
Qing He, Francis O. Eko, Deborah Lyn, Godwin A. Ananaba, Claudius Bandea, Joseph Martinez, Kabaliab Joseph, Kathy Kellar, Carolyn M. Black, and Joseph U. Igietseme
Editing Antigen Presentation: Antigen Transfer between Human B Lymphocytes and Macrophages Mediated by Class A Scavenger Receptors
Bohdan P. Harvey, Timothy E. Quan, Benjamin J. Rudenga, Robert M. Roman, Joe Craft, and Mark J. Mamula

αββ2/MAdCAM-1 Interactions Play an Essential Role in Transitioning Cryptopatches into Isolated Lymphoid Follicles and a Nonessential Role in Cryptopatch Formation
Caifeng Wang, Jacqueline S. McDonough, Keeley G. McDonald, Conway Huang, and Rodney D. Newberry

B7-H3 Contributes to the Development of Pathogenic Th2 Cells in a Murine Model of Asthma
Osamu Nagashima, Norihiko Harada, Yoshiko Usui, Tomohide Yamazaki, Hideo Yagita, Ko Okumura, Kazuhisa Takahashi, and Hisaya Akiba

Effector Mechanisms of the Autoimmune Syndrome in the Murine Model of Autoimmune Polyglandular Syndrome Type 1
Jason J. DeVoss, Anthony K. Shum, Kelsey P. A. Johannes, Wen Lu, Anna K. Krawisz, Peter Wang, Ting Yang, Norbert P. LeClair, Cecilia Austin, Erich C. Strauss, and Mark S. Anderson

Inside-Out Regulation of FcεRI (CD89) Depends on PP2A
Jantine E. Bakema, Annie Bakker, Simone de Hatij, Henk Honing, Madelon Bracke, Leo Koenderman, Gestur Vidarsson, Jan G. J. van de Winkel, and Jeanette H. W. Leusen

T11/17 Cells Mediate Steroid-Resistant Airway Inflammation and Airway Hyperresponsiveness in Mice
Laura McKinley, John F. Alcorn, Alanna Peterson, Rachel B. DuPont, Shernaaz Kapadia, Alison Logar, Adam Henry, Charles G. Irvin, Jon D. Piganelli, Anuradha Ray, and Jay K. Kolls

MOLECULAR AND STRUCTURAL IMMUNOLOGY

Impact of a Three Amino Acid Deletion in the CH2 Domain of Murine IgG1 on Fc-Associated Effector Functions

An Atypical NF-κB-Regulated Pathway Mediates Phorbol Ester-Dependent Heme Oxygenase-1 Gene Activation in Monocytes
Srivatsava Nasdu, Nasiti Wijayanti, Senor Santos, Thomas Kietzmann, and Stephan Immenschuh

IMMUNOGENETICS

A RAG1 Mutation Found in Omenn Syndrome Causes Coding Flank Hypersensitivity: A Novel Mechanism for Antigen Receptor Repertoire Restriction
Serre-Yu Wong, Catherine P. Lu, and David B. Roth

HOST DEFENSE

Sulfhydryl-Based Tumor Antigen-Carrier Protein Conjugates Stimulate Superior Antitumor Immunity against B Cell Lymphomas
David J. Betting, Kamran Kaft, Ali Reza Abdollahi-Fard, Sara A. Hurwitz, and John M. Timmerman

Importance of TLR2 in Early Innate Immune Response to Acute Pulmonary Infection with Porphyromonas gingivalis in Mice
George Hajishengallis, Min Wang, Gregory J. Bagby, and Steve Nelson

Characterization of T Cell Responses to the RgpA-Kgp Proteinase-Adhesin Complexes of Porphyromonas gingivalis in BALB/c Mice

Francisella tularensis Live Vaccine Strain Induces Macrophage Alternative Activation as a Survival Mechanism
Kari Ann Shirrey, Leah E. Cole, Achiab D. Keegan, and Stefanie N. Vogel

A Novel Role for Non-Neutralizing Antibodies against Nucleoprotein in Facilitating Resistance to Influenza Virus
Damian M. Carragher, Denise A. Kaminski, Amy Moquin, Louise Hartson, and Troy D. Randall
Lipids Including Cholesteryl Linoleate and Cholesteryl Arachidonate Contribute to the Inherent Antibacterial Activity of Human Nasal Fluid
Thai Q. Do, Safiekhbatuo Moshkani, Patricia Castillo, Suda Anunta, Adelina Pogosyan, Annie Cheung, Beth Marbois, Kyn F. Faull, William Ernst, Su Ming Chiang, Gary Fujii, Catherine F. Clarke, Krishna Foster, and Edith Porter

Trafficking of Antigen-Specific CD8⁺ T Lymphocytes to Mucosal Surfaces following Intramuscular Vaccination
David R. Kaufman, Jinyan Liu, Angela Carville, Keith G. Mansfield, Menzo J. H. Havenga, Jaap Goudsmidt, and Dan H. Barouch

Smallpox Inhibitor of Complement Enzymes (SPICE): Regulation of Complement Activation on Cells and Mechanism of Its Cellular Attachment
M. Kathryn Liszewski, Paula Bertram, Marilyn K. Leung, Richard Hauhart, Lijuan Zhang, and John P. Atkinson

Essential Involvement of CX3CR1-Mediated Signals in the Bactericidal Host Defense during Septic Peritonitis
Yuko Ishida, Takahito Hayashi, Takatsugu Goto, Akihiko Kimura, Shigeru Akimoto, Naofumi Mukaida, and Toshikazu Kondo

Elevated Numbers of FcγRIIIA⁺ (CD16⁺) Effector CD8 T Cells with NK Cell-Like Function in Chronic Hepatitis C Virus Infection

PIR-B-Deficient Mice Are Susceptible to Salmonella Infection
Ikuko Torii, Satoshi Oka, Muneki Hotomi, William H. Benjamin, Jr., Toshiyuki Takai, John F. Kearney, David E. Briles, and Hiroki Kabagawa

High Mobility Group Protein-1 Inhibits Phagocytosis of Apoptotic Neutrophils through Binding to Phosphatidylserine
Gang Liu, Jing Wang, Young-Jun Park, Yuko Tsuruta, Emmanuel F. Lorne, Xia Zhao, and Edward Abraham

Acid Sphingomyelinase Amplifies Redox Signaling in Pseudomonas aeruginosa-Induced Macrophage Apoptosis
Yang Zhang, Xiang Li, Alexander Carpinteiro, and Erich Gulbins

INFLAMMATION

Inhibition of Arginase Activity Enhances Inflammation in Mice with Allergic Airway Disease, in Association with Increases in Protein S-Nitrosylation and Tyrosine Nitration

Liver X Receptor Agonists Increase Airway Reactivity in a Model of Asthma via Increasing Airway Smooth Muscle Growth
Mark A. Birrell, Jorge De Alba, Matthew C. Catley, Elizabeth Hardaker, Sissie Wong, Michael Collins, Deborah L. Clarke, Stuart N. Farrows, Timothy M. Willson, Jon L. Collins, and Maria G. Belvisi

RAGE Ligation Affects T Cell Activation and Controls T Cell Differentiation

TLR-2 and IL-17A in Chitin-Induced Macrophage Activation and Acute Inflammation
Carla A. Da Silva, Dominik Hartl, Wei Liu, Chun G. Lee, and Jack A. Elias

Hydrogen Sulfide Augments Neutrophil Migration through Enhancement of Adhesion Molecule Expression and Prevention of CXCR2 Internalization: Role of ATP-Sensitive Potassium Channels
Identification of Functional Roles for Both IL-17RB and IL-17RA in Mediating IL-25-Induced Activities
Erika A. Rickel, Lori A. Siegel, Bo-Rin Park Yoon, James B. Rottman, David G. Kugler, David A. Swart, Penny M. Anders, Joel E. Tocker, Michael R. Comeau, and Alison L. Budelsky

Intradermal Administration of Thymic Stromal Lymphopoietin Induces a T Cell- and Eosinophil-Dependent Systemic Th2 Inflammatory Response
Heidi K. Jessup, Avery W. Brewer, Miyuki Omori, Erika A. Rickel, Alison L. Budelsky, Bo-Rin Park Yoon, Steven F. Ziegler, and Michael R. Comeau

Endogenous Hydrogen Sulfide Regulates Inflammatory Response by Activating the ERK Pathway in Polymicrobial Sepsis
Huili Zhang, Shabhir M. Mooschala, and Madhav Bhatia

Serum Amyloid A Induces CCL2 Production via Formyl Peptide Receptor-Like 1-Mediated Signaling in Human Monocytes
Ha Young Lee, Sang Doo Kim, Jae Woong Shim, Sun Young Lee, Hwahyung Lee, Kyung-Hyun Cho, Jeanbo Yun, and Yoe-Sik Bae

Cross-Tolerization between Nod1 and Nod2 Signaling Results in Reduced Refractoriness to Bacterial Infection in Nod2-Deficient Macrophages
Yun-Gi Kim, Jong-Hwan Park, Stephanie Daigualt, Koichi Fukase, and Gabriel Náñez

The Oxidation State of Phospholipids Controls the Oxidative Burst in Neutrophil Granulocytes
Stephan Bläml, Berit Ruc, Akos Lorincz, Maria Seyerl, Stefanie Kirchberger, Olga Osolhova, Valery N. Bochkov, Otto Majdic, Erzseret Ligeti, and Johannes Stöckl

Unique Properties of the Chicken TLR4/MD-2 Complex: Selective Lipopolysaccharide Activation of the MyD88-Dependent Pathway
A. Marijke Keestra and Jos P. M. van Putten

CLINICAL IMMUNOLOGY

Potent Tumor-Specific Protection Ignited by Adoptively Transferred CD4+ T Cells
Zuqiang Liu, Hae S. Noh, Janet Chen, Jin H. Kim, Louis D. Falo, Jr., and Zhuyang You

Rapid Deletional Peripheral CD8 T Cell Tolerance Induced by Allogeneic Bone Marrow: Role of Donor Class II MHC and B Cells
Thomas Fehr, Sophia Wang, Fabienne Haspot, Josef Kurtz, Peter Blaha, Timothy Hogan, Meredith Chittenden, Thomas Wekerle, and Megan Sykes

4-1BB Enhances Proliferation of Beryllium-Specific T Cells in the Lung of Subjects with Chronic Beryllium Disease
Douglas G. Mack, Allison K. Lanham, Brent E. Palmer, Lisa A. Maier, Tania H. Watts, and Andrew P. Fontenot

Lung Resident Mesenchymal Stem Cells Isolated from Human Lung Allografts Inhibit T Cell Proliferation via a Soluble Mediator
Lamis Jarvinen, Linda Badri, Scott Wettlaufer, Takashi Ohtsuka, Theodore J. Standiford, Galen B. Toews, David J. Pinisky, Marc Peters-Golden, and Vibha N. Lama

Evidence for an Association between Thyroid-Stimulating Hormone and Insulin-Like Growth Factor 1 Receptors: A Tale of Two Antigens Implicated in Graves’ Disease
Shanli Tsui, Vibha Naik, Neil Hoo, Catherine J. Huang, Nikoo F. Afifiyan, Amiya Sinha Hikim, Andrew G. Gianoukakis, Raymond S. Douglas, and Terry J. Smith

CD8+ T Cells Targeting a Single Immunodominant Epitope Are Sufficient for Elimination of Established SV40 T Antigen-Induced Brain Tumors
Angela M. Tatum, Lawrence M. Mylin, Susan J. Bender, Matthew A. Fischer, Beth A. Vigiotti, M. Judith Tevethia, Satvir S. Tevethia, and Todd D. Schell

Elevated Maternal IL-16 Levels, Enhanced IL-16 Expressions in Endothelium and Leukocytes, and Increased IL-16 Production by Placental Trophoblasts in Women with Preeclampsia
Yang Gu, David F. Lewis, Kelli Deere, Lynn J. Groome, and Yuping Wang

Author Index