This information is current as of March 4, 2021.

Why The JI? Submit online.

- **Rapid Reviews! 30 days** from submission to initial decision
- **No Triage!** Every submission reviewed by practicing scientists
- **Fast Publication!** 4 weeks from acceptance to publication

*average

**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)
IN THIS ISSUE

LETTERS TO THE EDITOR

3855 Comment on “CD226 Is Specifically Expressed on the Surface of Th1 Cells and Regulates Their Expansion and Effector Functions”
Kazuko Shibuya, Kai Shibata, Satoko Tahara-Hanaoka, and Akira Shibuya

3856 Response to Comment on “CD226 Is Specifically Expressed on the Surface of Th1 Cells and Regulates Their Expansion and Effector Functions”
Valerie Dardalhon, Anna S. Schubart, and Vijay K. Kuchroo

3856 Comment on “Cutting Edge: TLR4 Deficiency Confers Susceptibility to Lethal Oxidant Lung Injury”
Hiroshi Kubo and Kota Ishizawa

3857 Response to Comment on “Cutting Edge: TLR4 Deficiency Confers Susceptibility to Lethal Oxidant Lung Injury”
Xuchen Zhang and Patty J. Lee

PILLARS OF IMMUNOLOGY

3859 The Birth of Functionally Distinct T Cell Subsets
Leonard Chess

H. Cantor and E. A. Boyse

BRIEF REVIEWS

3877 The P2X7 Receptor: A Key Player in IL-1 Processing and Release
Davide Ferrari, Cinzia Pizzirani, Elena Adinolfi, Roberto M. Lemoli, Antonio Curti, Marco Idzko, Elisabeth Panther, and Francesco Di Virgilio

On the cover: Masson’s trichrome staining of a lung section from a mouse deficient in the ectonucleotidase enzyme CD73, which regulates the production of extracellular adenosine. The mice were challenged with bleomycin to stimulate pulmonary fibrosis. Blue staining represents collagen deposition in the airways. Also evident are numerous inflammatory cells. Volmer, J. B., L. F. Thompson, and M. R. Blackburn. 2006. Ecto-5'Nucleotidase (CD73)-Mediated Adenosine Production Is Tissue Protective in a Model of Bleomycin-Induced Lung Injury. J. Immunol. 176: 4449–4458.
Cutting Edge: Diminished T Cell TLR Expression and Function Modulates the Immune Response in Human Filarial Infection
Subash Babu, Carla P. Blauvelt, V. Kumaraswami, and Thomas B. Nutman

Cutting Edge: Enhanced Pulmonary Clearance of Pseudomonas aeruginosa by Muc1 Knockout Mice

Cutting Edge: Itk-Dependent Signals Required for CD4+ T Cells to Exert, but Not Gain, Th2 Effector Function
Byron B. Au-Yeung, Shoshana D. Katzman, and Deborah J. Fowell

Cutting Edge: IL-4-Induced Protection of CD4+CD25- Th Cells from CD4+CD25+ Regulatory T Cell-Mediated Suppression
Luigia Pace, Stefania Rizzo, Cecilia Palombi, Frank Brombacher, and Gino Doria

Cutting Edge: Elimination of an Endogenous Adjuvant Reduces the Activation of CD8 T Lymphocytes to Transplanted Cells and in an Autoimmune Diabetes Model
Yan Shi, Shelly A. Galash, and Kenneth L. Rock

Cutting Edge: B and T Lymphocyte Attenuator and Programmed Death Receptor-1 Inhibitory Receptors Are Required for Termination of Acute Allergic Airway Inflammation
Christine Deppong, Tuyta Phu, Michelle Hurley, Linda D. Friend, Dulari D. Shah, Christine M. Rose, Traci L. Bricker, Laurie P. Shornick, Erika C. Crouch, Theresa L. Murphy, Michael J. Holtzman, Kenneth M. Murphy, and Jonathan M. Green

Cellular Immunology and Immune Regulation

Dominant Tolerance to Kidney Allografts Induced by Anti-Donor MHC Class II Antibodies: Cooperation between T and Non-T CD103+ Cells
Nicolas Degauque, David Lair, Alexandre Dupont, Anne Moreau, Guénèlaise Roussey, Frédérique Moizant, François Xavier Hubert, Cédric Louvet, Marcelo Hill, Fabienne Haspot, Régis Josien, Claire Usal, Bernard Vanhove, Jean Paul Soulillou, and Sophie Brouard

Nitric Oxide Promotes Resistance to Tumor Suppression by CTLs
Zhanhai Su, Jürgen Kuball, Ana-Paula Barreiros, Daniela Gottfried, Edite Antunes Ferreira, Matthias Theobald, Peter R. Galle, Dennis Strand, and Susanne Strand

HIV-1 Envelope Triggers Polyclonal Ig Class Switch Recombination through a CD40-Independent Mechanism Involving BAFF and C-Type Lectin Receptors
Bing He, Xugang Qiao, Per J. Klaue, April Chiu, Amy Chadburn, Daniel M. Knowles, John P. Moore, and Andrea Cerutti

Phenotypic and Functional Similarity of Gut Intraepithelial and Systemic T Cells in a Teleost Fish
David Bernard, Adrien Six, Lionel Rigottier-Gois, Sébastien Messina, Stefan Chilmonczyk, Edwige Quillet, Pierre Boudinot, and Abdenour Benmanour

Desiccating Stress Induces T Cell-Mediated Sjögren’s Syndrome-Like Lacrimal Keratoconjunctivitis
Jerry Y. Niederkorn, Michael E. Stern, Stephen C. Pflueger, Cintia S. De Paiva, Rosa M. Correiras, Jianping Gao, and Karyn Siemasko

Downstream of Tyrosine Kinases-1 and Src Homology 2-Containing Inositol 5’-Phosphatase Are Required for Regulation of CD4+CD25+ T Cell Development
Masaki Kashiwada, Giorgio Cattoretti, Lisa McKeag, Todd Rose, Brian M. Showalter, Umama Al-Alem, Masaru Niki, Pier Paolo Pandolfi, Elizabeth H. Field, and Paul B. Rothman

Apoptotic Death Concurrent with CD3 Stimulation in Primary Human CD8+ T Lymphocytes: A Role for Endogenous Granzyme B
Mireille Laforge, Nicolas Bidère, Sylvie Carmona, Aurore Devocelle, Bernard Charpentier, and Anna Senik

IL-7 Is a Critical Factor in Modulating Lesion Development in Skn-Directed Autoimmunity
Pamela J. Staton, A. Betts Carpenter, and Susan H. Jackman
Protein Kinase B Is Required for Vesicle Trafficking and Class II Presentation of IgA Fc Receptor (CD89)-Targeted Antigen
Gillian A. Lang and Mark L. Lang

Essential Role of IkB Kinase α in Thymic Organogenesis Required for the Establishment of Self-Tolerance
Dan Kinoshita, Funiko Hirota, Tsuneyasu Kato, Michiyuki Kasai, Keisuke Izumi, Yoshimi Bando, Yasuhiko Mouri, Akemi Matushima, Shino Niki, Hongwei Han, Kiyotaka Oshikawa, Noriyuki Karoda, Masahiko Maegawa, Minoru Iwahara, Kiyoshi Takeda, Shizuo Akira, and Mitsuru Matsumoto

Distinct, Cross- Reactive Epitope Specificities of CD8 T Cell Responses Are Induced by Natural Hepatitis B Surface Antigen Variants of Different Hepatitis B Virus Genotypes
Petra Riedl, Antonio Bertolletti, Ross Lopes, François Lemonnier, Jörg Reimann, and Reinhold Schirmbeck

Induction of Peripheral T Cell Tolerance by Antigen-Presenting B Cells. I. Relevance of Antigen Presentation Persistence
Giorgio Raimondi, Ivan Zanoni, Stefania Citterio, Paola Ricciardi-Castagnoli, and Francesca Granucci

Induction of Peripheral T Cell Tolerance by Antigen-Presenting B Cells. II. Chronic Antigen Presentation Overrules Antigen-Presenting B Cell Activation
Giorgio Raimondi, Ivan Zanoni, Stefania Citterio, Paola Ricciardi-Castagnoli, and Francesca Granucci

Suppressor of Cytokine Signaling 1 Stringently Regulates Distinct Functions of IL-7 and IL-15 In Vivo during T Lymphocyte Development and Homeostasis
Sheela Ramanathan, Julien Gagnon, Chantal Leblanc, Robert Rottapel, and Subburaj Ilangoarman

Immunization-Induced Perturbation of Human Blood Plasma Cell Pool: Progressive Maturation, IL-6 Responsiveness, and High PRD1-BF1/BLIMP1 Expression Are Critical Distinctions between Antigen-Specific and Nonspecific Plasma Cells
Inés González-García, Esther Ocaña, Gema Jiménez-Gómez, Antonio Campos-Caro, and José A. Brieva

Effector T Cell Differentiation and Memory T Cell Maintenance Outside Secondary Lymphoid Organs
Jagdeep S. Obhrai, Martin H. Oberbonscheids, Timothy W. Hand, Lonnette Digg, Geetha Chalasani, and Fadi G. Lakkis

Long-Term Retention of Mature NK1.1+NKT Cells in the Thymus
Stuart P. Berzins, Finlay W. McNab, Claerwen M. Jones, Mark J. Smyth, and Dale I. Godfrey

EphA Receptors Inhibit Anti-CD3-Induced Apoptosis in Thymocytes
Andrew Freywald, Nigel Sharfe, Charlotte D'E. Miller, Cher Rashotte, and Chaim M. Roifman

T Cells Lacking Immunoproteasome Subunits MECL-1 and LMP7 Hyperproliferate in Response to Polyclonal Mitogens
Christy M. Caudill, Karpakar Jayaratna, Laura Elenich, John J. Monaco, Robert A. Colbert, and Thomas A. Griffin

Rapid Demethylation of the IFN-γ Gene Occurs in Memory but Not Naive CD8 T Cells
Ellen N. Kersh, David R. Fitzpatrick, Kaja Muralti-Krishna, John Shires, Samuel H. Speck, Jeremy M. Bos, and Rafi Ahmed

Impact of HLA-B Alleles, Epitope Binding Affinity, Functional Avidity, and Viral Coinfection on the Immunodominance of Virus-Specific CTL Responses

Mast Cell-Associated TNF Promotes Dendritic Cell Migration
Hajime Suto, Susumu Nakae, Maki Katakai, Jonathan D. Sedgwick, Mindy Tsai, and Stephen J. Galli

Immature NK Cells Suppress Dendritic Cell Functions during the Development of Leukemia in a Mouse Model
Kazumi Ebata, Yukihiro Shimizu, Yasuhiko Nakayama, Masami Minemura, Jun Murakami, Tsutomu Kato, Satoru Yasumura, Tetsuruk Takahara, Tohibu Sugiyama, and Shigeru Saito
CD4⁺ Regulatory T Cells Are Spared from Deletion by Antilymphocyte Serum, a Polyclonal Anti-T Cell Antibody
Keisuke Minamimura, Wenda Gao, and Takashi Maki

The Novel Inhibitory NKR-P1C Receptor and Ly49s3 Identify Two Complementary, Functionally Distinct NK Cell Subsets in Rats

Mast Cell-Dependent Down-Regulation of Antigen-Specific Immune Responses by Mosquito Bites
Nadya Depinay, Fériel Hacini, Walid Beghdadi, Roger Peronet, and Salaheddine Mécheri

TLR3-Involved Modulation of Pregnancy Tolerance in Double-Stranded RNA-Stimulated NOD/SCID Mice
Yi Lin, Zhenhong Liang, Yijing Chen, and Yangyong Zeng

Relationships between Distinct Blood Monocyte Subsets and Migrating Intestinal Lymph Dendritic Cells In Vivo under Steady-State Conditions
Ulf Yrlid, Christopher D. Jenkins, and G. Gordon MacPherson

Expression of the Adaptor Protein Hematopoietic Src Homology 2 is Up-Regulated in Response to Stimuli That Promote Survival and Differentiation of B Cells
Brantley R. Herrin and Louis B. Justement

MOLECULAR AND STRUCTURAL IMMUNOLOGY

A Novel NF-κB Binding Site Controls Human Granzyme B Gene Transcription
Chunjian Huang, Enguang Bi, Yu Hu, Weiwen Deng, Zhigang Tian, Chen Dong, Yuanjie Hu, and Bing Sun

Transactivator of Transcription from HIV Type 1 Subtype E Selectively Inhibits TNF Gene Expression via Interference with Chromatin Remodeling of the TNF Locus
Shahin Ranjbar, Ricardo Rajsbaum, and Anne E. Goldfeld

Costimulatory Receptors in a Teleost Fish: Typical CD28, Elusive CTLA4
David Bernard, Beatrice Riteau, John D. Hansen, Ruth B. Phillips, Frédérique Michel, Pierre Boudinot, and Abdeneur Benmannour

Role of Fyn in the Rearrangement of Tubulin Cytoskeleton Induced through TCR
Noa B. Martín-Coñeres, David Sancho, Edgar Fernández, Miguel Vicente-Manzanares, Mónica Gordón-Alonso, María C. Montoya, Frédérique Michel, Oreste Acuto, Balbino Alarcón, and Francisco Sánchez-Madrid

Small Molecules That Enhance the Catalytic Efficiency of HLA-DM

IMMUNOGENETICS

Complete Sequence Assembly and Characterization of the C57BL/6 Mouse Ig Heavy Chain V Region
Colette M. Johnston, Andrew L. Wood, Daniel J. Bolland, and Anne E. Corcoran

HOST DEFENSE

CXCL10 Is the Key Ligand for CXCR3 on CD8⁺ Effector T Cells Involved in Immune Surveillance of the Lymphocytic Choriomeningitis Virus-Infected Central Nervous System
Jeanette Erbo Christensen, Carina de Lemos, Torben Moos, Jan Pravsgaard Christensen, and Allan Randrup Thomsen

Agonistic Antibody to TLR4/MD-2 Protects Mice from Acute Lethal Hepatitis Induced by TNF-α

Hematin Activation Ameliorates HIV-1 Infection via Heme Oxygenase-1 Induction
Krishnakumar Devadas and Subhash Dhawan
4258 Trypsin-Sensitive Modulation of Intestinal Epithelial MD-2 as Mechanism of Lipopolysaccharide Tolerance
Elke Cario, Douglas T. Golenbock, Alberto Visintin, Michael Rüngzi, Guido Gerken, and Daniel K. Podolsky

4267 Macrophage Apoptosis in Response to High Intracellular Burden of Mycobacterium tuberculosis Is Mediated by a Novel Caspase-Independent Pathway
Jinhee Lee, Heinz G. Remold, Michael H. Ieong, and Hardy Kornfeld

4275 TLRs Regulate the Gatekeeping Functions of the Intestinal Follicle-Associated Epithelium
Sophie Chabot, Jessica S. Wagner, Stephanie Farrant, and Marian R. Neutra

4284 IFN-Induced Attrition of CD8 T Cells in the Presence or Absence of Cognate Antigen during the Early Stages of Viral Infections
Kapil Bahl, Sung-Kwon Kim, Claudia Calcagno, Davio Ghersi, Roberto Puzone, Franco Celada, Liisa K. Selin, and Raymond M. Welsh

4296 Contribution of CD8+ T Cells to Control of Mycobacterium tuberculosis Infection
Dhruv Sud, Carolyn Bigbee, JoAnne L. Flynn, and Denise E. Kirschner

4315 Complement Component C3 Is Required for Protective Innate and Adaptive Immunity to Larval Strongyloides stercoralis in Mice
Laura A. Kerepesi, Jessica A. Hess, Thomas J. Nolan, Gerhard A. Schad, and David Abraham

4323 Mycobacterium tuberculosis 19-kDa Lipoprotein Inhibits IFN-γ-Induced Chromatin Remodeling of MHC2TA by TLR2 and MAPK Signaling
Meghan E. Pennini, Rish K. Pai, David C. Schulze, W. Henry Boom, and Clifford V. Harding

4331 Homing and Function of Human Skin γδ T Cells and NK Cells: Relevance for Tumor Surveillance
Lisa M. Ebelt, Simone Meuter, and Bernhard Moser

4337 Distinct Roles of TLR2 and the Adaptor ASC in IL-1β/IL-18 Secretion in Response to Listeria monocytogenes

4343 Type I IFN Receptor Signals Directly Stimulate Local B Cells Early following Influenza Virus Infection
Elizabeth S. Coro, W. L. William Chang, and Nicole Baumgarth

INFLAMMATION

4352 Oncostatin-M Up-Regulates VCAM-1 and Synergizes with IL-4 in Eotaxin Expression: Involvement of STAT6
Dominik K. Fritz, Christine Kerr, Li Tong, David Smyth, and Carl D. Richards

4361 Lung-Restricted Macrophage Activation in the Pearl Mouse Model of Hermansky-Pudlak Syndrome
Lisa R. Young, Michael T. Borchers, Holly L. Allen, Reta S. Gibbons, and Francis X. McCormack

4369 Role of the Property of C-Reactive Protein to Activate the Classical Pathway of Complement in Protecting Mice from Pneumococcal Infection
Madathilparambil V. Suresh, Sanjay K. Singh, Donald A. Ferguson, Jr., and Alok Agrawal

4375 Critical Role for Mast Cells in the Pathogenesis of 2,4-Dinitrobenzene-Induced Murine Colonic Hypersensitivity Reaction
Anneke Rijnierse, Andries S. Koster, Frans P. Nijkamp, and Aletta D. Kraneveld

4385 IL-4-Induced Peroxisome Proliferator-Activated Receptor γ Activation Inhibits NF-κB Trans Activation in Central Nervous System (CNS) Glial Cells and Protects Oligodendrocyte Progenitors under Neuroinflammatory Disease Conditions: Implication for CNS-Demyelinating Diseases
Ajaib S. Paintlia, Manjeet K. Paintlia, Inderjit Singh, and Avtar K. Singh

4399 Severe Disease, Unaltered Leukocyte Migration, and Reduced IFN-γ Production in CXCR3−/− Mice with Experimental Autoimmune Encephalomyelitis
Liping Liu, DeRen Huang, Masaru Matsui, Toby T. He, Taofang Hu, Julie DeMartino, Bao Lu, Craig Gerard, and Richard M. Ransohoff
Spatial and Temporal Profiles for Anti-Inflammatory Gene Expression in Leukocytes during a Resolving Model of Peritonitis
Amilcar S. Damazo, Simon Yona, Roderick J. Flower, Mauro Perretti, and Sonia M. Oliani

CSMD1 Is a Novel Multiple Domain Complement-Regulatory Protein Highly Expressed in the Central Nervous System and Epithelial Tissues
Damian M. Kraus, Gary S. Elliott, Hilary Chute, Thomas Horan, Karl H. Pfenninger, Staci D. Sanford, Stephen Foster, Sheila Scully, Andrew A. Welcher, and V. Michael Holers

The Vast Majority of CLA\(^+\) T Cells Are Resident in Normal Skin
Rachael A. Clark, Benjamin Chong, Nina Mirchandani, Nooshin K. Brinster, Kei-ichi Yamanaka, Rebecca K. Dowgiert, and Thomas S. Kupper

Cysteinyl Leukotrienes Regulate Th2 Cell-Dependent Pulmonary Inflammation
Daniel C. Kim, F. Ida Hsu, Nora A. Barrett, Daniel S. Friend, Roland Grenningloh, I-Cheng Ho, Amal Al-Garawi, Jose M. Lora, Bing K. Lam, K. Frank Austen, and Yoshihide Kanaoka

Ecto-5\(^{\prime}\)-Nucleotidase (CD73)-Mediated Adenosine Production Is Tissue Protective in a Model of Bleomycin-Induced Lung Injury
Jonathan B. Volmer, Linda F. Thompson, and Michael R. Blackburn

**CLINICAL IMMUNOLOGY**

Monitoring the Antitumor Response of Naive and Memory CD8 T Cells in RAG1\(^{-/-}\) Mice by Positron-Emission Tomography
Helen Su, Daisy S. Chang, Sanjiv S. Gambhir, and Jonathan Braun

The Potential of Adiponectin in Driving Arthritis
Angela Ehling, Andreas Schäffler, Hans Herfarth, Ingo H. Tarner, Sven Anders, Oliver Distler, Gisela Paul, Jörg Distler, Steffen Gay, Jürgen Schölmerich, Elena Neumann, and Ulf Müller-Ladner

Iodination of Tyrosyls in Thyroglobulin Generates Neoantigenic Determinants That Cause Thyroiditis
Haiyan S. Li and George Carayanniotis

Functional Study of CD4\(^{+}\)CD25\(^{+}\) Regulatory T Cells in Health and Autoimmune Hepatitis
Maria Serena Longhi, Munther J. Husain, Ragai R. Miry, Sunil K. Arora, Giorgina Mieli-Vergani, Diego Vergani, and Yun Ma

Author Index

AAI Membership Application

AAI Trainee Membership Application