This information is current as of July 29, 2017.

179 (3)

J Immunol 2007; 179:1411-2022; ;
http://www.jimmunol.org/content/179/3

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
1411 IN THIS ISSUE

PILLARS OF IMMUNOLOGY

1413 IL-2: More Than a T Cell Growth Factor
Joost J. Oppenheim

Francis W. Ruscetti, Doris A. Morgan, and Robert C. Gallo

CUTTING EDGE

1423 Cutting Edge: Opposite Effects of IL-1 and IL-2 on the Regulation of IL-17+ T Cell Pool IL-1 Subverts IL-2-Mediated Suppression
Ilona Kryczek, Shuang Wei, Linhua Vatan, June Escar-Wilke, Wojciech Szcziga, Evan T. Keller, and Weiping Zou

1427 Cutting Edge: OX40 Inhibits TGF-β- and Antigen-Driven Conversion of Naive CD4 T Cells into CD25+Foxp3+ T cells
Takanori So and Michael Croft

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

1431 Lack of Reactive Oxygen Species Breaks T Cell Tolerance to Collagen Type II and Allows Development of Arthritis in Mice
Malin Hultqvist, Johan Bäcklund, Kristin Bauer, Kyra A. Gelderman, and Rikard Holmdahl

1438 Controls for Lung Dendritic Cell Maturation and Migration during Respiratory Viral Infection
Mitchell H. Grayson, Madeleine S. Ramos, Michelle M. Rohlfing, Robert Kitschen, Howard D. Wang, Aaron Gould, Eugene Agapov, and Michael J. Holtzman

1449 TNF-α Drives Human CD14+ Monocytes to Differentiate into CD70+ Dendritic Cells Evoking Th1 and Th17 Responses
Sanju Iwamoto, Shin-ichi Iwai, Kazuko Tsubiyama, Chika Kurahashi, Kumiyo Takeshita, Michio Naoe, Atsuko Masunaga, Yoohi Ogawa, Katsuji Oguchi, and Akira Miyazaki

1458 A Fusion Protein Consisting of IL-16 and the Encephalitogenic Peptide of Myelin Basic Protein Constitutes an Antigen-Specific Tolerogenic Vaccine That Inhibits Experimental Autoimmune Encephalomyelitis
Mark D. Mannie and Derek J. Abbott

On the cover: Confocal microscopy of murine mesenchymal stem cells isolated from C57BL/6 mice expressing the green fluorescent protein (GFP) transgene. The cells express GFP (green) in culture. Staining for actin (red) with a rhodamine-labeled Ab is shown as a reference. Staining of nuclei with DAPI is shown in blue. Gupta, N., X. Su, B. Popov, J. W. Lee, V. Serikov, and M. A. Matthay. 2007. Intrapulmonary delivery of bone marrow-derived mesenchymal stem cells improves survival and attenuates endotoxin-induced acute lung injury in mice. J. Immunol. 179: 1855–1863.
1466 Xenogeneic β2-Microglobulin Substitution Alters NK Cell Function
Loralyn A. Benoît and Rusung Tan

1475 Molecular and Functional Characterization of IL-15 in Rainbow Trout *Oncorhynchus mykiss*:
A Potent Inducer of IFN-γ Expression in Spleen Leukocytes
Tiehui Wang, Jason W. Holland, Allison Carrington, Jun Zou, and Christopher J. Secombes

1489 CD8⁺ Dendritic Cells Use LFA-1 to Capture MHC-Peptide Complexes from Exosomes In Vivo
Elodie Segura, Coralie Guérin, Nancy Hogg, Sebastian Amigorena, and Clotilde Théry

1497 Prostaglandin E₂ Is a Major Inhibitor of Dendritic Cell Maturation and Function in Ixodes scapularis
Saliva
Anderson Sá-Nunes, André Bafica, David A. Lucas, Thomas P. Conrads, Timothy D. Veenstra, John F. Andersen,
Thomas N. Mather, José M. C. Ribeiro, and Ivo M. B. Francischetti

1506 Immunomodulatory Dendritic Cells Inhibit Th1 Responses and Arthritis via Different Mechanisms
Leonie M. van Duivenvoorde, Wanda G. H. Han, Aleida M. Bakker, Pascale Louis-Plence, Louis-Marie Charbonnier,
Florence Apparailly, Ellen I. H. van der Voort, Christian Jorgensen, Tom W. J. Huizinga, and René E. M. Toes

1516 CD86 Regulates IgG₁ Production via a CD19-Dependent Mechanism
Nicholas W. Kin and Virginia M. Sanders

1524 Steady State Dendritic Cells Present Parenchymal Self-Antigen and Contribute to, but Are Not Essential for,
Tolerization of Naive and Th1 Effector CD4 Cells
Adam T. Hagymasi, Aaron M. Slaiby, Marianne A. Mihalyo, Harry Z. Qui, David J. Zammit, Leo Lefrançois,
and Adam J. Adler

1532 Listeriolysin O Expressed in a Bacterial Vaccine Suppresses CD4⁺CD25high Regulatory T Cell Function
In Vivo
Joianne Nitsche-Tefit, Ming-Shen Dai, Rebecca J. Critchley-Thorne, Francisco Ramirez-Jimenez, Man Xu,
Sophie Conchon, Nicolas Ferry, Hans J. Stauss, and Georges Vassaux

1542 Both Infiltrating Regulatory T Cells and Insufficient Antigen Presentation Are Involved in Long-Term
Cardiac Xenograft Survival
Wenhao Chen, Jun Diao, Stanislaw M. Stepkowski, and Li Zhang

1549 Regulation of MHC Class II Expression and Antigen Processing in Murine and Human Mesenchymal
Stromal Cells by IFN-γ, TGF-β, and Cell Density
Raphaele Romieu-Mourez, Moïra François, Marie-Noëlle Boivin, John Stagg, and Jacques Galipeau

1559 Spontaneous and Prostatic Steroid Binding Protein Peptide-Induced Autoimmune Prostatitis in the
Nonobese Diabetic Mouse
Giuseppe Penna, Susana Amuchastegui, Chiara Cossetti, Francesca Aquilano, Roberto Mariani, Nadia Giarratana,
Elena De Carlo, Benedetta Fibbi, and Luciano Adorini

1568 Cross-Talk between T Cells and Innate Immune Cells Is Crucial for IFN-γ-Dependent Tumor Rejection
Zhiguang Li, Felicia Pradera, Thomas Kammertons, Bing Li, Shubai Liu, and Zhihai Qin

1577 Sphingosine 1-Phosphate-Mediated Trafficking of Pathogenic Th2 and Mast Cells for the Control of
Food Allergy
Yosuke Kurashima, Jun Kunisawa, Morio Higuchi, Masashi Gohda, Izumi Ishikawa, Naoko Takayama, Miki Shimizu,
and Hiroshi Kiyono

1586 Ca²⁺ Signals in CD4⁺ T Cells during Early Contacts with Antigen-Bearing Dendritic Cells in
Lymph Node
Sindy H. Wei, Olga Safrina, Ying Yu, Kym R. Garrod, Michael D. Cabalan, and Ian Parker

1595 Adult Human Fibroblasts Are Potent Immunoregulatory Cells and Functionally Equivalent to
Mesenchymal Stem Cells
Muzlifah A. Haniffa, Xiao-Nong Wang, Udo Holtick, Michelle Rae, John D. Isaacs, Anne M. Dickinson,
Catharien M. U. Hilkens, and Matthew P. Collin
1605 Noninvasive Intravital Imaging of Thymocyte Dynamics in Medaka
Jie Li, Norimasa Iwanami, Vu Quynh Hoa, Makoto Furutani-Seiki, and Yousuke Takahama

1616 LFA-1-Mediated T Cell Costimulation through Increased Localization of TCR/Class II Complexes to the Central Supramolecular Activation Cluster and Exclusion of CD45 from the Immunological Synapse
Beth Graf, Timothy Bushnell, and Jim Miller

1625 Detection of KIR3DS1 on the Cell Surface of Peripheral Blood NK Cells Facilitates Identification of a Novel Null Allele and Assessment of KIR3DS1 Expression during HIV-1 Infection

1634 Modulatory Effects of 1,25-Dihydroxyvitamin D3 on Human B Cell Differentiation
Sheng Chen, Gary P. Sims, Xiao Xiang Chen, Yue Ying Gu, Shunle Chen, and Peter E. Lipsky

1648 Respiratory Syncytial Virus Synergizes with Th2 Cytokines to Induce Optimal Levels of TARC/CCL17
Martha M. Monick, Linda S. Powerr, Ihab Haasan, Dayna Groskreutz, Timur O. Yarovinsky, Christopher W. Barrett, Elaine M. Castilow, Delia Tifrea, Steven M. Varga, and Gary W. Hunninghake

1659 Ig Heavy Chain Promotes Mature B Cell Survival in the Absence of Light Chain
Pedro Geraldes, Michelle Rebrovich, Kai Herrmann, Jamie Wong, Hans-Martin Jak, Matthias Wabl, and Marilia Cascalho

1669 IFN-γ and Fas Ligand Are Required for Graft-versus-Tumor Activity against Renal Cell Carcinoma in the Absence of Lethal Graft-versus-Host Disease
Teresa Ramirez-Montagut, Andrew Chow, Adam A. Kochman, Odette M. Smith, David Sub, Hamad Sindhi, Sydney Lu, Chiara Borotti, Jeremy Grubin, Neel Patel, Theis H. Terwey, Theo D. Kim, Glenn Heller, George F. Murphy, Chen Liu, Onder Alpdogan, and Marcel R. M. van den Brink

1681 Functional Role for IlkB5 in T Cell Cytokine Regulation As Revealed by Targeted Gene Disruption
Maki Touma, Valeria Antonini, Manoj Kumar, Stephanie L. Osborn, April M. Bobenchik, Derin B. Keskin, John E. Connolly, Michael J. Grusby, Ellis L. Reinherz, and Linda K. Clayton

1693 Eosinophils from Lineage-Ablated ΔdblGATA Bone Marrow Progenitors: The dblGATA Enhancer in the Promoter of GATA-1 Is Not Essential for Differentiation Ex Vivo
Kimberly D. Dyer, Megan Czapiga, Barbara Foster, Paul S. Foster, Elizabeth M. Kang, Courtney M. Lappas, Jennifer M. Moser, Nora Naumann, Caroline M. Percopo, Steven J. Siegel, Jonathan M. Swartz, SukSee Ting-De Ravin, and Helene F. Rosenberg

1700 Neonatal B Cells Suppress Innate Toll-Like Receptor Immune Responses and Modulate Alloimmunity
Wendy E. Walker and Daniel R. Goldstein

1711 Triggering of Dendritic Cell Responses after Exposure to Activated, but Not Resting, Apoptotic PBMCs
Ulrika Johansson, Lilian Wolther-Jallou, Anna Smed-Sorensen, and Anna-Lena Spetz

1721 Myeloid and Plasmacytoid Dendritic Cells Are Susceptible to Recombinant Adenovirus Vectors and Stimulate Polyfunctional Memory T Cell Responses
Karin Loré, William C. Adams, Menzo J. E. Havenga, Melissa L. Precopo, Lennart Holterman, Jaap Goudsmidt, and Richard A. Koup

MOLeULAR AND STRuCTuRAL IMMUnOlOGY

1730 Genetic Engineering of the Major Timothy Grass Pollen Allergen, Phl p 6, to Reduce Allergenic Activity and Preserve Immunogenicity
Susanne Vrtala, Margarete Focke, Jolanta Kopec, Petra Verdino, Arnulf Hartl, Wolfgang R. Sperr, Alexander A. Fedorov, Tanja Ball, Steve Alno, Peter Valent, Josef Thalhammer, Walter Keller, and Rudolf Valenta

1740 Coordinated Involvement of Mast Cells and T Cells in Allergic Mucosal Inflammation: Critical Role of the CC Chemokine Ligand 1:CCR8 Axis
Jose-Angel Gonzalez, Yukin Qiu, Joe M. Lara, Anad Al-Garaui, Jean-Luc Villeval, Joshua A. Boyce, Carlos Martinez-A, Gabriel Marquez, Iñigo Goya, Qutayba Hamid, Christopher C. Fraser, Dominic Picarella, Javier Cote-Sierra, Martin R. Hodge, Jose-Carlos Gutierrez-Ramos, Roland Kolbeck, and Anthony J. Coyle
NF-κB p50/p65 Affects the Frequency of Ly49 Gene Expression by NK Cells

OX40 Gene Expression Is Up-Regulated by Chromatin Remodeling in Its Promoter Region Containing Sp1/Sp3, YY1, and NF-κB Binding Sites
Yukiko Tone, Yoshitsugu Kojima, Keiji Furusuchi, Maya Brady, Yumi Yashiro-Ohsani, Mark L. Tykocinski, and Maahide Tone

The Related Adaptors, Adaptor in Lymphocytes of Unknown Function X and Rlk/Itk-Binding Protein, Have Nonredundant Functions in Lymphocytes
Claire E. Perchonock, Anthony G. Pajerowski, Chau Nguyen, Michael J. Shapiro, and Virginia Smith Shapiro

Despite Inhibition of Nuclear Localization of NF-κB p65, c-Rel, and RelB, 17-β Estradiol Up-Regulates NF-κB Signaling in Mouse Splenocytes: The Potential Role of Bcl-3
Rujuan Dai, Rebecca A. Phillips, and S. Ansar Ahmed

A Natural Hypomorphic Variant of the Apoptosis Regulator Gimap4/IAN1
Christine Carter, Carine Dion, Silke Schnell, W. John Coadwell, Margaret Graham, Lucy Hepburn, Geoffrey Morgan, Amanda Hutchings, John C. Pascal, Heinz Jacobs, J. Rou Miller, and Geoffrey W. Butcher

Early Innate Immune Responses to Sin Nombre Hantavirus Occur Independently of IFN Regulatory Factor 3, Characterized Pattern Recognition Receptors, and Viral Entry
Joseph B. Prescott, Pamela R. Hall, Virgine S. Bondu-Hawkins, Chunyan Ye, and Brian Hjelle

Efficient Cross-Presentation by Heat Shock Protein 90-Peptide Complex-Loaded Dendritic Cells via an Endosomal Pathway
Takehiro Kurotaki, Yasuaki Tamura, Gohei Ueda, Jun Oura, Gozo Katsuki, Yohshibo Hirohoshi, Hiroshi Sabara, Yoshiko Torigoe, Hiroshi Hirotsuka, Hajime Sunakawa, Koichi Hirata, and Norsuyki Sato

The p47 GTPases Iigp2 and Irgb10 Regulate Innate Immunity and Inflammation to Murine Chlamydia psittaci Infection
Isao Miyairi, Venkat R. R. Arvaitireddigari, Ohaimatsu S. Mahdi, Lorne A. Rose, Robert J. Belland, Lu Lu, Robert W. Williams, and Gerald I. Byrne

Inhibition of Phagosome Maturation by Mycobacteria Does Not Interfere with Presentation of Mycobacterial Antigens by MHC Molecules
Laleh Majlessi, Benoit Combazier, Imke Albrecht, Imke Albrecht, Jessica E. Garcia, Clémence Nouse, Jean Pieters, and Claude Leclerc

The Intrinsic Apoptotic Pathway Is Required for Lipopolysaccharide-Induced Lung Endothelial Cell Death
Helena L. Wang, I. Ozkan Akinci, Christina M. Baker, Daniela Urich, Amy Bellmeyer, Manu Jain, Navdeep S. Chandel, Gökhan M. Matia, and G. R. Scott Budinger

Streptococcus suis Serotype 2, an Important Swine and Human Pathogen, Induces Strong Systemic and Cerebral Inflammatory Responses in a Mouse Model of Infection
Maria C. Dominguez-Punaro, Mariela Segura, Marielle Plante, Sonia Lacouture, Serge Rivest, and Marcelo Gottschalk

Intrapulmonary Delivery of Bone Marrow-Derived Mesenchymal Stem Cells Improves Survival and Attenuates Endotoxin-Induced Acute Lung Injury in Mice
Naveen Gupta, Xiao Su, Boris Popov, Jae Woo Lee, Vladimir Serkova, and Michael A. Matthay
1864 Inhalation of Toluene Diisocyanate Vapor Induces Allergic Rhinitis in Mice
Victor J. Johnson, Berran Yucesoy, Jeff S. Reynolds, Kara Fluharty, Wei Wang, Diana Richardson, and Michael I. Luster

1872 Dominant-Negative Inhibitors of Soluble TNF Attenuate Experimental Arthritis without Suppressing Innate Immunity to Infection

1884 Adenosine Deamination Sustains Dendritic Cell Activation in Inflammation
Melanie D. Desrosiers, Katherine M. Cembrola, Michael J. Fakir, Leslie A. Stephens, Fatimina M. Jama, Afshin Shaneli, Wajafat Z. Mehal, Pere Santamaria, and Yan Shi

1893 FOXP3 Regulates TLR10 Expression in Human T Regulatory Cells
Michael P. Bell, Phyllis A. Svingen, Meher K. Rahman, Yuning Xiong, and William A. Faubion, Jr.

1901 Multiple Chemokine Receptors, Including CCR6 and CXCR3, Regulate Antigen-Induced T Cell Homing to the Human Asthmatic Airway
Seddon Y. Thomas, Aleena Banerji, Benjamin D. Medoff, Craig M. Lilly, and Andrew D. Luster

1913 Nonclassical IL-1β Secretion Stimulated by P2X7 Receptors Is Dependent on Inflammomodulin Activation and Correlated with Exosome Release in Murine Macrophages
Yan Qu, Luigi Franchi, Gabriel Nunez, and George R. Dubyak

1926 Targeted Deletion of M KK4 Gene Potentiates TNF-Induced Apoptosis through the Down-Regulation of NF-κB Activation and NF-κB-Regulated Antia apoptotic Gene Products
Gautam Sethi, Kwang Seok Ahn, Dianren Xia, Jonathan M. Kurie, and Bhurat B. Aggarwal

1934 Identification of PurA as a New Hypoxia Response Factor Responsible for Coordinated Induction of the β3 Integrin Family
Tianqing Kong, Melanie Scully, C. Simon Shelley, and Sean P. Colgan

1942 IFN-γ-Mediated Survival Enables Human Neutrophils to Produce MCP-1/CCL2 in Response to Activation by TLR Ligands
Teizo Yoshimura and Munehisa Takahashi

1950 Extracellular Acidosis Triggers the Maturation of Human Dendritic Cells and the Production of IL-12
Diego Martinez, Mónica Vermeulen, Erika von Euw, Juan Sabatté, Julian Maggiini, Ana Ceballos, Analía Trevani, Karen Nahmod, Gabriela Salamone, Marcela Barrio, Mirta Giordano, Sebastian Amigorena, and Jorge Geffner

**CLINICAL IMMUNOLOGY**

1960 Targeting the Primary Tumor to Generate CTL for the Effective Eradication of Spontaneous Metastases
Ping Yu, Youjin Lee, Yang Wang, Xiaojuan Liu, Sogyong Auh, Thomas F. Gajewski, Hans Schreiber, Zhuyang You, Campbell Kaynor, Xinzhong Wang, and Yang-Xin Fu

1969 Exosomes with Immune Modulatory Features Are Present in Human Breast Milk
Charlotte Admyre, Sara M. Johansson, Khaleda Rubman Qazi, Jan-Jonas Filen, Riitta Labesmaa, Mikael Norman, Etiene P. A. Nève, Annika Scheiniiu, and Susanne Gabrielson

1979 Programmed Death 1 Expression on HIV-Specific CD4+ T Cells Is Driven by Viral Replication and Associated with T Cell Dysfunction
Michelle D’Souza, Andrew P. Fontenot, Doug G. Mack, Catherine Lozapone, Stephanie Dillon, Amie Meditz, Cara C. Wilson, Elizabeth Connick, and Brent E. Palmer

1988 Human CD8+ T Cell Memory Generation in Puumala Hantavirus Infection Occurs after the Acute Phase and Is Associated with Boosting of EBV-Specific CD8+ Memory T Cells
Tamara Tuisa, Enisa Kekalainen, Sari Mäkelä, Ilpo Ala-Houhala, Francis A. Ennis, Klaus Hedman, Jukka Mustonen, Antti Vaheri, and T. Petteri Arstila

1996 CCR4-Expressing T Cell Tumors Can Be Specifically Controlled via Delivery of Toxins to Chemokine Receptors
Dolgor Baatar, Purevdorj Olkhanud, Dianne Newton, Kenya Sumitomo, and Arja Biragyn