193 (1)

J Immunol 2014; 193:1-451; ; http://www.jimmunol.org/content/193/1

This information is current as of April 18, 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
1 B Cells Boost Tregs See article p. 170
Too Young To Remember Well See article p. 177
AID Needs Aid See article p. 252
GAS M Protein Fuels IgA Nephropathy See article p. 317
WC1 Domains Alter Signal Strength See article p. 379

PILLARS OF IMMUNOLOGY
3 Hunting Autoimmune Disease Genes in NOD: Early Steps on a Long Road to Somewhere Important (Hopefully)
Edward K. Wakeland

John A. Todd, Timothy J. Airman, Richard J. Cornell, Soumitra Ghosh, Jennifer R. S. Hall, Catherine M. Hearne, Andrew M. Knight, Jennifer M. Love, Marcia A. McAleer, Jan-Bas Prins, Nanda Rodrigues, Mark Lathrop, Alison Pressey, Nicole H. DeLarato, Laurence B. Peterson, and Linda S. Wicker

BRIEF REVIEWS
13 The Ground State of Innate Immune Responsiveness Is Determined at the Interface of Genetic, Epigenetic, and Environmental Influences
Edward Huang and Christine Anne Wells

CUTTING EDGE
21 Cutting Edge: Antigen-Specific Thymocyte Feedback Regulates Homeostatic Thymic Conventional Dendritic Cell Maturation
Nicholas A. Spidale, Bo Wang, and Roland Tisch

26 Cutting Edge: Parathyroid Hormone Facilitates Macrophage Efferocytosis in Bone Marrow via Proresolving Mediators Resolvin D1 and Resolvin D2
Laurie K. McCauley, Jesmond Dalli, Amy J. Koh, Nan Chiang, and Charles N. Serhan

30 Cutting Edge: Vitamin D Regulates Lipid Metabolism in *Mycobacterium tuberculosis* Infection
Hugh Salamon, Natalie Bruiners, Karim Lakehal, Lanbo Shi, Janani Ravi, Ken D. Yamaguchi, Richard Pine, and Maria Laura Gennaro

35 Cutting Edge: Dexamethasone Potentiates the Responses of Both Regulatory T Cells and B-1 Cells to Antigen Immunization in the ApoE<sup>−/−</sup> Mouse Model of Atherosclerosis
Anhhuang Chen, Yajun Geng, Hanzhong Ke, Laura Constant, Zhaogqi Yan, Yue Pan, Patricia Lee, Jiashan Tan, Kurt Williams, Samantha George, Gnanasekar Munirathinam, Catherine A. Reardon, Godfrey S. Getz, Bin Wang, and Guoxing Zheng

**ALLERGY AND OTHER HYPERSENSITIVITIES**

41 Aspirin Activation of Eosinophils and Mast Cells: Implications in the Pathogenesis of Aspirin-Exacerbated Respiratory Disease
John W. Steinke, Julie Negri, Lixia Liu, Spencer C. Payne, and Larry Borish

**ANTIGEN RECOGNITION AND RESPONSES**

48 Tofacitinib Suppresses Antibody Responses to Protein Therapeutics in Murine Hosts
Masanori Onda, Kamran Ghoreschi, Scott Steward-Tharp, Craig Thomas, John J. O'Shea, Ira H. Pastan, and David J. FitzGerald

56 TCR Microclusters Pre-Exist and Contain Molecules Necessary for TCR Signal Transduction
Travis J. Crites, Kartika Padhan, James Muller, Michelle Krogsgaard, Prabhakar R. Gudla, Stephen J. Lockett, and Rajat Varma

68 Accumulation of Serial Forces on TCR and CD8 Frequently Applied by Agonist Antigenic Peptides Embedded in MHC Molecules Triggers Calcium in T Cells
Sergey Pryshchep, Veronika I. Zarnitsyna, Jinsung Hong, Brian D. Evavold, and Cheng Zhu

77 Superimposed Epitopes Restricted by the Same HLA Molecule Drive Distinct HIV-Specific CD8<sup>+</sup> T Cell Repertoires
Xiaoming Sun, Mamoru Fujiwara, Yi Shi, Nozomi Kuse, Hiroyuki Gatanaga, Victor Appay, George F. Gao, Shinichi Oka, and Masafumi Takiguchi

85 Lysophosphatidic Acid Receptor 5 Inhibits B Cell Antigen Receptor Signaling and Antibody Response

**AUTOIMMUNITY**

96 The Thyroxine-Containing Thyroglobulin Peptide (aa 2549–2560) Is a Target Epitope in Iodide-Accelerated Spontaneous Autoimmune Thyroiditis
Panayota Kolypetri, Karen Carayanniotis, Shofur Rahman, Paris E. Georgiou, Vasiliki Magafia, Paul Cordopatis, and George Carayanniotis

**CLINICAL AND HUMAN IMMUNOLOGY**

102 Hemin Controls T Cell Polarization in Sickle Cell Alloimmunization
Hui Zhong, Weili Bao, David Friedman, and Karina Yazdanbakhsh

111 Endogenously Expressed IL-13Rα2 Attenuates IL-13–Mediated Responses but Does Not Activate Signaling in Human Lung Fibroblasts

120 IL-1β Promotes the Differentiation of Polyfunctional Human CCR6<sup>+</sup>CXCR3<sup>+</sup> Th1/17 Cells That Are Specific for Pathogenic and Commensal Microbes
Thomas Duhen and Daniel J. Campbell
The Inhibitory Effect of IFN-γ on Protease HTRA1 Expression in Rheumatoid Arthritis
Yuzhu Hou, Haijiang Lin, Linnan Zhu, Zhaoting Liu, Fanles Hu, Jianfeng Shi, Tao Yang, Xueyun Shi, Huifang Guo, Xiaotian Tan, Lianfeng Zhang, Qiang Wang, Zhuangli Li, and Yong Zhao

**IMMUNE REGULATION**

Astrocytic TGF-β Signaling Limits Inflammation and Reduces Neuronal Damage during Central Nervous System Toxoplasma Infection
Egle Cekanaviciute, Hans K. Dietrich, Robert C. Axtell, Aaron M. Williams, Riann Egusquiza, Karen M. Wai, Anita A. Koshy, and Marion S. Buckwalter

Nuclear Role of WASp in Gene Transcription Is Uncoupled from Its ARP2/3-Dependent Cytoplasmic Role in Actin Polymerization
Sanjoy Sadhukhan, Koustav Sarkar, Matthew Taylor, Fabio Candotti, and Yatin M. Vyas

Unique Temporal and Spatial Expression Patterns of IL-33 in Ovaries during Ovulation and Estrous Cycle Are Associated with Ovarian Tissue Homeostasis
Colin I. Carlock, Jean Wu, Cindy Zhou, Kiana Tatsum, Henry P. Adams, Filemon Tan, and Yahuan Lou

A Role for Intrathymic B Cells in the Generation of Natural Regulatory T Cells
Stacey N. Walters, Kylie E. Webster, Stephen Daley, and Shane T. Grey

Rapid Proliferation and Differentiation Impairs the Development of Memory CD8+ T Cells in Early Life
Norah L. Smith, Erin Wissink, Joelyn Wang, Jennifer F. Pinello, Miles P. Davenport, Andrew Grimson, and Brian D. Rudd

Modeling the Clinical Phenotype of BTK Inhibition in the Mature Murine Immune System
Micah J. Benson, Varenka Rodriguez, David von Schack, Sean Keegan, Tim A. Cook, Jason Edmonds, Stephen Benoit, Nilufer Seth, Sarah Du, Dean Messing, Cheryl L. Nickerson-Nutter, Kyri Dunwski-Joannopoulos, Andrew L. Rankin, Melanie Ruzek, Mark E. Schnute, and John Douhan, III

BCL6 Controls Th9 Cell Development by Repressing Il9 Transcription
Ribal Bassil, William Orent, Marta Olah, Ahmed T. Kurdi, Michael Frangieh, Thomas Buttrick, Samia J. Khoury, and Wassim Elyaman

Bovine γδ T Cells Are a Major Regulatory T Cell Subset
Efrain Guzman, Jayne Hope, Geraldine Taylor, Adrian L. Smith, Carolina Cubillos-Zapata, and Bryan Charleston

Inhibition of Bone Remodeling in Young Mice by Bisphosphonate Displaces the Plasma Cell Niche into the Spleen
Stefan Teufel, Bettina Grötsch, Julia Luther, Anja Derer, Thorsten Schinke, Michael Amling, Georg Schett, Dirk Mielenz, and Jean-Pierre David

Podocytes Regulate Neutrophil Recruitment by Glomerular Endothelial Cells via IL-6–Mediated Crosstalk
Sahithi J. Kuravi, Helen M. McGettrick, Simon C. Satchell, Moin A. Saleem, Lorraine Harper, Julie M. Williams, George Ed Rainger, and Caroline O. S. Savage

Differential Impact of CD27 and 4-1BB Costimulation on Effector and Memory CD8 T Cell Generation following Peptide Immunization
Jane E. Willoughby, Jonathan P. Kerr, Anne Rogel, Vadim Y. Taraban, Sarah L. Buchan, Peter W. M. Johnson, and Aymen Al-Shamkhani

**IMMUNE SYSTEM DEVELOPMENT**

Binding of AID to DNA Does Not Correlate with Mutator Activity
Allysia J. Matthews, Solomon Husain, and Jayanta Chaudhuri

Membrane Association of the CD3ε Signaling Domain Is Required for Optimal T Cell Development and Function
Matthew L. Bettini, Clifford Guy, Pradhyot Dash, Kate M. Vignali, David E. Hamn, Jessica Dobbins, Etienne Gagnon, Paul G. Thomas, Kai W. Wucherpfennig, and Dario A. A. Vignali
The Role of the Syk/Shp-1 Kinase-Phosphatase Equilibrium in B Cell Development and Signaling
Ameera Alsadeq, Elias Hobeika, David Medgyesi, Kathrin Kläser, and Michael Reth

INFECTIOUS DISEASE AND HOST RESPONSE

NK Cell Responses to Simian Immunodeficiency Virus Vaginal Exposure in Naive and Vaccinated Rhesus Macaques
Liang Shang, Anthony J. Smith, Lijie Duan, Katherine E. Perkey, Lucy Qu, Stephen Wietgrefe, Mary Zupancic, Peter J. Southern, Katherine Masek-Hammerman, R. Keith Reeves, R. Paul Johnson, and Ashley T. Haase

IL-27 Limits Central Nervous System Viral Clearance by Promoting IL-10 and Enhances Demyelination
Maria Teresa P. de Aquino, Parul Kapil, David R. Hinton, Timothy W. Phares, Shweta S. Puntambekar, Carine Savarin, Cornelia C. Bergmann, and Stephen A. Stohlman

Mycobacterium tuberculosis Keto-Mycolic Acid and Macrophage Nuclear Receptor TR4 Modulate Foamy Biogenesis in Granulomas: A Case of a Heterologous and Noncanonical Ligand-Receptor Pair

Tetherin Promotes the Innate and Adaptive Cell–Mediated Immune Response against Retrovirus Infection In Vivo
Sam X. Li, Bradley S. Barrett, Karl J. Heilman, Ronald J. Messer, Rachel A. Liberatore, Paul D. Bieniasz, George Kassiotis, Kim J. Hasenkrug, and Mario L. Santiago

INNATE IMMUNITY AND INFLAMMATION

The Combined Role of Galactose-Deficient IgA1 and Streptococcal IgA–Binding M Protein in Inducing IL-6 and C3 Secretion from Human Mesangial Cells: Implications for IgA Nephropathy

miR-27a Regulates Inflammatory Response of Macrophages by Targeting IL-10
Na Xie, Huachun Cui, Sani Banerjee, Zheng Tan, Reinaldo Salomao, Mingui Fu, Edward Abraham, Victor J. Thannickal, and Gang Liu

A Critical Role for Human Caspase-4 in Endotoxin Sensitivity
Yuji Kajiwara, Tamar Schiff, Georgios Voloudakis, Miguel A. Gama Soa, Gregory Elder, Ozlem Bozdagi, and Joseph D. Buchbaum

Infiltrating Monocyte-Derived Macrophages and Resident Kupffer Cells Display Different Ontogeny and Functions in Acute Liver Injury
Ehud Zigmond, Shany Samia-Grinberg, Metsada Pasmanik-Chor, Eli Brazowski, Oren Shibolet, Zamir Halpern, and Chen Varol

Proliferation Conditions Promote Intrinsic Changes in NK Cells for an IL-10 Response
Margaret L. Tarrio, Seung-Hwan Lee, Maria F. Fragoso, Hong-Wei Sun, Yuka Kanno, John J. O’Shea, and Christine A. Biron

Porcine Cathelicidins Efficiently Complex and Deliver Nucleic Acids to Plasmacytoid Dendritic Cells and Can Thereby Mediate Bacteria-Induced IFN-α Responses
Arnaud Baumann, Thomas Démoulin, Sylvie Python, and Artur Summerfield

Gcsf-Chr19 Promotes Neutrophil Migration to Damaged Tissue through Blood Vessels in Zebrafish
Jorge A. Galdames, Constanza Zúñiga-Traslaviña, Ariel E. Reyes, and Carmen G. Feijóo

MOLECULAR AND STRUCTURAL IMMUNOLOGY

Signal Transduction by Different Forms of the γδ T Cell–Specific Pattern Recognition Receptor WC1
Chuang Chen, Haoting Hsu, Edward Hudgens, Janice C. Telfer, and Cynthia L. Baldwin

T Cell Activation Regulates CD6 Alternative Splicing by Transcription Dynamics and SRSF1
Vânia G. da Glória, Mafalda Martins de Araújo, Ana Mafalda Santos, Rafaela Leal, Sérgio F. de Almeida, Alexandre M. Carmo, and Alexandra Moreira
400 Characterization of Conventional and Atypical Receptors for the Chemokine CCL2 on Mouse Leukocytes
Laura B. Ford, Vuk Cerovic, Simon W. F. Milling, Gerard J. Graham, Chris A. H. Hansell, and Robert J. B. Nibbs

412 Coordinated Histone H3 Methylation and Acetylation Regulate Physiologic and Pathologic Fas Ligand Gene Expression in Human CD4+ T Cells
Smita S. Ghare, Swati Joshi-Barve, Akshata Moghe, Madhuvanti Patil, David F. Barker, Leila Gobejishvili, Guy N. Brock, Matthew Cave, Craig J. McClain, and Shirish S. Barve

422 T Cell–Intrinsic Function of the Noncanonical NF-κB Pathway in the Regulation of GM-CSF Expression and Experimental Autoimmune Encephalomyelitis Pathogenesis
Jiayi Yu, Xiaofei Zhou, Mako Nakaya, Wei Jin, Xuhong Cheng, and Shao-Cong Sun

MUCOSAL IMMUNOLOGY

431 Specific Microbiota-Induced Intestinal Th17 Differentiation Requires MHC Class II but Not GALT and Mesenteric Lymph Nodes

439 Luminal Microbes Promote Monocyte–Stem Cell Interactions Across a Healthy Colonic Epithelium
Dagmara A. Skoczek, Petr Walczysko, Nikki Horn, Alyson Parris, Simon Clare, Mark R. Williams, and Anastasia Sobolewski

452 AUTHOR INDEX

454 INFORMATION FOR AUTHORS