184 (11)

J Immunol 2010; 184:5931-6557; ;
http://www.jimmunol.org/content/184/11

This information is current as of August 22, 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

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
5931 IN THIS ISSUE

PILLARS OF IMMUNOLOGY

5933 CD4 on the Road to Coreceptor Status
Dario A. A. Vignali

Carolyn Doyle and Jack L. Strominger

BRIEF REVIEWS

5939 Small RNAs Guide Hematopoietic Cell Differentiation and Function
Francisco Navarro and Judy Lieberman

CUTTING EDGE

5949 Cutting Edge: A Thymocyte-Thymic Epithelial Cell Cross-Talk Dynamically Regulates Intrathymic IL-7 Expression In Vivo
Nuno L. Alves, Nicholas D. Huntington, Jean-Jacques Mention, Odile Richard-Le Goffi, and James P. Di Santo

5954 Cutting Edge: Delay and Reversal of T Cell Tolerance by Intratumoral Injection of Antigen-Loaded Dendritic Cells in an Autochthonous Tumor Model
Eileen M. Higham, Ching-Hung Shen, K. Dane Wittrup, and Jianzhu Chen

5959 Cutting Edge: Mechanical Forces Acting on T Cells Immobilized via the TCR Complex Can Trigger TCR Signaling
Ya-Chen Li, Bing-Mae Chen, Pei-Chun Wu, Tuan-Lu Cheng, Lung-Sen Kao, Mi-Hua Tao, Andre Lieber, and Steve R. Roffler

5964 Cutting Edge: Rag Deletion in Peripheral T Cells Blocks TCR Revision
J. Scott Hale, Kristina T. Ames, Tamar E. Boursalian, and Pamela J. Fink

On the cover: The structure of the Vg2Vd2 T cell Ag receptor is shown with the CDRs colored. Alanine mutations in all CDR loops altered recognition of prenyl pyrophosphates with strong contributions from germline elements of CDR3g (green residues) but minimal contributions from CDR3d (yellow residues). These results show that prenyl pyrophosphate recognition primarily involves germline-encoded regions of the γδ TCR, allowing a high proportion of Vγ2Vδ2 TCRs to respond. The large footprint strongly supports the existence of a presenting molecule for these Ags. Wang, H., Z. Fang, and C. T. Morita. 2010. Vγ2Vδ2 T cell receptor recognition of prenyl pyrophosphates is dependent on all CDRs. *J. Immunol.* 181: 6209–6222.
CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

5969 APC Activation by IFN-α Decreases Regulatory T Cell and Enhances Th Cell Functions
Luigia Pace, Sara Vitale, Beatrice Dettori, Cecilia Palombi, Valentina La Sorsa, Filippo Belardelli, Enrico Proietti, and Gino Doria

5980 Hemoglobin Transforms Anti-Inflammatory Salmonella typhi Virulence Polysaccharide into a TLR-2 Agonist
Rohini Garg and Ayub Qadri

5988 Both CD4 and CD8 T Cells Mediate Equally Effective In Vivo Tumor Treatment When Engineered with a Highly Avid TCR Targeting Tyrosinase

5999 Counterregulation between the FcεRI Pathway and Antiviral Responses in Human Plasmacytoid Dendritic Cells
Michelle A. Gill, Gagan Bajwa, Tiffany A. George, Caroline C. Dong, Irene I. Dougherty, Nan Jiang, Vanthaya N. Gan, and Rebecca S. Gruchalla

6007 CD28 Facilitates the Generation of Foxp3− Cytokine Responsive Regulatory T Cell Precursors
Chan-Wang J. Lio, Lindzy F. Dudon, Christine M. Deppong, Chyi-Song Hsieh, and Jonathan M. Green

6025 Neuronal Nitric Oxide Synthase Modulates Maturation of Human Dendritic Cells
Henric S. Adler, Alexandra Simon, Edith Graulich, Alice Habermeier, Nicole Bacher, Andreas Friebe, Ellen I. Closs, and Kerstin Steinbrink

6043 Cross-Talk between T Cells and NK Cells Generates Rapid Effector Responses to Plasmodium falciparum-Infected Erythrocytes
Amir Horowitz, Kirsty C. Newman, J. Henry Evans, Daniel S. Korbel, Daniel M. Davis, and Eleanor M. Riley

6053 MicroRNA-466l Upregulates IL-10 Expression in TLR-Triggered Macrophages by Antagonizing RNA-Binding Protein Tristetraprolin-Mediated IL-10 mRNA Degradation
Feng Ma, Xingguang Liu, Dong Li, Pin Wang, Nan Li, Liwei Lu, and Xuetao Cao

6067 Maintenance of Immune Tolerance to a Neo-Self Acetylcholine Receptor Antigen with Aging: Implications for Late-Onset Autoimmunity
Sue Stacy, Earlanda L. Williams, Nathan E. Standifer, Amanda Pasquali, Keith A. Krolick, Anthony J. Infante, and Ellen Kraig

6084 Transcription Factor E2F1 Suppresses Dendritic Cell Maturation
Fang Fang, Yan Wang, Rui Li, Ying Zhao, Yang Guo, Ming Jiang, Jie Sun, Yang Ma, Zijia Ren, Zhigang Tian, Feng Wei, De Yang, and Weihua Xiao
The Immunostimulatory Activity of Unmethylated and Methylated CpG Oligodeoxynucleotide Is Dependent on Their Ability To Colocalize with TLR9 in Late Endosomes
Susan D. de Jong, Genc Basha, Kaley D. Wilson, Mikameh Kazem, Pieter Cullis, Wilf Jefferies, and Ying Tam

Gender-Specific Expression of β1 Integrin of VLA-4 in Myelin Basic Protein-Primed T Cells: Implications for Gender Bias in Multiple Sclerosis
Saurav Brahmachari and Kalipada Pahan

The Role of the CCL2/CCR2 Axis in Mouse Mast Cell Migration In Vitro and In Vivo
Sarah J. Collington, Jenny Hallgren, James E. Peate, Tatiana G. Jones, Barrett J. Rollins, John Westrick, K. Frank Austen, Timothy J. Williams, Michael F. Gurish, and Charlotte L. Weller

Erbb2 DNA Vaccine Combined with Regulatory T Cell Deletion Enhances Antibody Response and Reveals Latent Low-Avidity T Cells: Potential and Limits of Its Therapeutic Efficacy
Simona Rolla, Francesco Ria, Sergio Occhipinti, Gabriele Di Sante, Manuela Iezzi, Michela Spadaro, Chiara Nicolò, Elena Ambrosino, Irene Fiore Merighi, Piero Musiani, Guido Forni, and Federica Cavallo

Foxa2 Programs Th2 Cell-Mediated Innate Immunity in the Developing Lung
Gang Chen, Huajing Wan, Fengming Luo, Liqian Zhang, Yan Xu, Ian Lewkowich, Marsha Wills-Karp, and Jeffrey A. Whitsett

Expanded CD23⁺/CD21hi B Cells in Inflamed Lymph Nodes Are Associated with the Onset of Inflammatory-Erosive Arthritis in TNF-Transgenic Mice and Are Targets of Anti-CD20 Therapy
Jie Li, Igor Kazin, Sajekhat Samooshkani, Steven T. Proulx, Lianping Xing, Denise Skrombolas, Robert Dunn, Inaki Sanz, Edward M. Schwarz, and Andrea Bottaro

Antigen-Specific Immunity and Cross-Priming by Epithelial Ovarian Carcinoma-Induced CD11b⁺Gr-1⁺ Cells
Kei Tomihara, Miao Guo, Takako Shin, Xiubua Sun, Sara M. Ludwig, Michael J. Brumlik, Bin Zhang, Tyler J. Curiel, and Tahiru Shin

RORC2 Is Involved in T Cell Polarization through Interaction with the FOXP3 Promoter
Simone Burgler, Pierre-Yves Mantel, Claudio Basuin, Nadia Ouaked, Gezmi A. Akdis, and Carsten B. Schmid-Weber

Reporter Alleles that Inform on Differences in Cre Recombinase Expression
Mark Klinger, Stephen A. Chmura, and Nigel Killeen

MOLECULAR AND STRUCTURAL IMMUNOLOGY

p53 Represses Class Switch Recombination to IgG2a through Its Antioxidant Function
Jeroen E. J. Guikema, Carol E. Schrader, Michael H. Brudsky, Erin K. Linehan, Adam Richards, Nahla El Falaky, Daniel H. Li, Hayla K. Sluss, Eva Szomolanyi-Tsuda, and Janet Stavnezer

Genome-Wide RNA Interference in Drosophila Cells Identifies G Protein-Coupled Receptor Kinase 2 as a Conserved Regulator of NF-kB Signaling
Susanna Valanne, Henna Myllymäki, Jenni Kallio, Martin Rudolf Schmid, Anni Kleino, Astrid Murtomäki, Laura Aitakinen, Tapio Koutela, Meri Kaustio, Johanna Uleva, Shiya Seyedolezami Esfahani, Ylva Engström, Olli Silvennoinen, Dan Hultmark, Mataleena Parikka, and Mika Räme

HLA-F Complex without Peptide Binds to MHC Class I Protein in the Open Conformer Form
Jodie P. Goodridge, Aura Burian, Ni Lee, and Daniel E. Geraghty

Vγ2Vδ2 T Cell Receptor Recognition of Prenyl Pyrophosphates Is Dependent on All CDRs
Hong Wang, Zhimei Fang, and Craig T. Morita

Minimal Amino Acid Exchange in Human TCR Constant Regions Fosters Improved Function of TCR Gene-Modified T Cells
Daniel Sommermeyer and Wolfgang Uckert

Selected Murine Residues Endow Human TCR with Enhanced Tumor Recognition
Gil Bialer, Miryam Horovitz-Fried, Shlomo Ya’acobi, Richard A. Morgan, and Cyrille J. Cohen
Switch Region Identity Plays an Important Role in Ig Class Switch Recombination
Palash Bhattacharya, Robert Wuerffel, and Amy L. Kenter

The E3 Ubiquitin Ligase RNF5 Targets Virus-Induced Signaling Adaptor for Ubiquitination and Degradation
Bo Zhong, Yu Zhang, Bo Tan, Tian-Tian Liu, Yan-Yi Wang, and Hong-Bing Shu

IMMUNOGENETICS

Identification and Characterization of a Lupus Suppressor 129 Locus on Chromosome 3
Francesco Carlucci, Liliane Fossati-Jimack, Ingrid E. Dumitriu, Yasin Heidari, Mark J. Walport, Marta Szajna, Paramita Barnab, Oliver A. Garden, H. Terence Cook, and Marina Botto

HOST DEFENSE

Monocyte Trafficking to Hepatic Sites of Bacterial Infection Is Chemokine Independent and Directed by Focal Intercellular Adhesion Molecule-1 Expression
Chao Shi, Peter Velázquez, Tobias M. Hohl, Ingrid Leiner, Michael L. Dustin, and Eric G. Pamer

Diabetic Mice Display a Delayed Adaptive Immune Response to Mycobacterium tuberculosis
Therese Vallskog, Gregory W. Martens, and Hardy Kornfeld

Specificity of Staphylococcal Superantigen-Like Protein 10 toward the Human IgG1 Fc Domain
Deepa Patel, Bruce D. Wines, Ria J. Langley, and John D. Fraser

Immune Complex-Mediated Enhancement of Secondary Antibody Responses
Chelsey L. Goins, Craig P. Chappell, Rangaiah Shashidharamurthy, Periasamy Selvaraj, and Joshy Jacob

A Role for IL-1 Receptor-Associated Kinase-M in Prostaglandin E2-Induced Immunosuppression Post-Bone Marrow Transplantation
Leah L. N. Hubbard, Megan N. Ballinger, Preedkayil E. Thomas, Carol A. Wilke, Theodore J. Standiford, Koichi S. Kobayashi, Richard A. Flavell, and Bethany B. Moore

Superior Antitumor Response Induced by Large Stress Protein Chaperoned Protein Antigen Compared with Peptide Antigen
Xiang-Yang Wang, Xiaolei Sun, Xing Chen, John Facciponte, Elizabeth A. Repasky, John Kane, and John R. Subjeck

Lack of Original Antigenic Sin in Recall CD8+ T Cell Responses
Dietmar Zehn, Michael J. Turner, Leo Lefrançois, and Michael J. Bevan

INFLAMMATION

Mouse and Human Eosinophils Degranulate in Response to Platelet-Activating Factor (PAF) and LysoPAF via a PAF-Receptor–Independent Mechanism: Evidence for a Novel Receptor
Kimberly D. Dyer, Caroline M. Percopo, Zhihui Xie, Zhao Yang, John Dongil Kim, Francis Davoine, Paige Lacy, Kirk M. Druey, Redwan Moqbel, and Helene F. Rosenberg

(1,3)-β-Glucans Activate Both Dectin-1 and NLRP3 Inflammasome in Human Macrophages
Päivi Kanekunen, Laura Teirilä, Johanna Rintahaka, Harri Aienius, Henrik Wolff, and Sampa Matikainen

Surfactant Protein D-Mediated Decrease of Allergen-Induced Inflammation Is Dependent upon CTLA4
Ko-Wei Lin, Kai Yu Jen, Carlos Jose Suarez, Erika C. Crouch, David L. Perkins, and Patricia W. Finn

Human Eosinophils Recognize Endogenous Danger Signal Crystalline Uric Acid and Produce Proinflammatory Cytokines Mediated by Autocrine ATP
Takehito Kobayashi, Hideaki Kouzaki, and Hirohito Kita

Identification of a Novel Human MD-2 Splice Variant That Negatively Regulates Lipopolysaccharide-Induced TLR4 Signaling
Pearl Gray, Kathrin S. Michelena, Cherlyn M. Sirois, Emily Lowe, Kenichi Shimada, Timothy R. Crother, Shuang Chen, Constantinos Brikos, Yonca Bulut, Eiche Latz, David Underhill, and Mohit Arditii
IL-17A–Producing γδ T and Th17 Lymphocytes Mediate Lung Inflammation but Not Fibrosis in Experimental Silicosis
Sandra Lo Re, Laure Dumoutier, Isabelle Couillin, Charlotte Van Vyve, Yousof Yakoub, Francine Uwambayinema,
Benoit Marien, Sybille van den Brule, Jacques Van Snick, Catherine Uyttenhove, Bernard Ryffel, Jean-Christophe Renauld,
Dominique Lison, and François Huaux

Identifying the Cells Breaching Self-Tolerance in Autoimmunity
Robert A. Benson, Agapitos Patakas, Paola Conigliaro, Catherine M. Rush, Paul Garside, Iain B. McInnes,
and James M. Brewer

Extracellular DNA: A Major Proinflammatory Component of Pseudomonas aeruginosa Biofilms
Juan I. Faouman Bais, Daniela M. Ruso, Maria L. Gabelloni, Jorge R. Geffner, Mirta Giordano, Mariana Catalano,
Ángeles Zorreguieta, and Analía S. Trevani

Membrane-Type I Matrix Metalloproteinase-Dependent Regulation of Rheumatoid Arthritis Synoviocyte Function
Farideh Sabeh, David Fox, and Stephen J. Weiss

CD93/A4.1: A Novel Regulator of Inflammation in Murine Focal Cerebral Ischemia
Denise Harhausen, Vincent Prinz, Gina Ziegler, Karen Gertz, Matthias Endres, Hans Lehrach, Philippe Gasque,
Marina Botto, Philip F. Stabel, Ulrich Dinndag, Wilfried Niewoehner, and George Tredelenburg

Resolution of Inflammation in Murine Autoimmune Arthritis Is Disrupted by Cyclooxygenase-2 Inhibition
and Restored by Prostaglandin E2-Mediated Lipoxin A4 Production
Marion Man-Ying Chan and Andrea Ross Moore

Acute Serum Amyloid A Induces Migration, Angiogenesis, and Inflammation in Synovial Cells In Vitro and
in a Human Rheumatoid Arthritis/SCID Mouse Chimera Model
Mary Connolly, Alessandra Marrelli, Mark Blades, Jennifer McCormick, Paola Maderna, Catherine Godson, Ronan Mullan,
Oliver FitzGerald, Barry Bresnihan, Costantino Pitzalis, Douglas J. Veale, and Ursula Fearon

Arginase I Suppresses IL-12/IL-23p40–Driven Intestinal Inflammation during Acute Schistosomiasis
De’Broki R. Herbert, Tatiana Orekov, Amanda Rolston, Monica Ilies, Charles Perkins, William O’Brien,
Stephen Cederbaum, David W. Christianson, Nives Zimmermann, Marc E. Rothenberg, and Fred D. Finkelstein

Scaffolding Adaptor Protein Gab1 Is Required for TLR3/4- and RIG-I–Mediated Production
of Proinflammatory Cytokines and Type I IFN in Macrophages
Yuejuan Zheng, Huazhang An, Ming Yao, Jin Hou, Yizhi Yu, Gensheng Feng, and Xuetao Cao

Treatment of Autoimmune Arthritis Using RNA Interference-Modulated Dendritic Cells
Xiaofen Zheng, Motohiko Suzuki, Thomas E. Ichim, Xusheng Zhang, Hongtao Sun, Fei Zhu, Aminah Shunnar,
Bertha Garcia, Robert D. Inman, and Weiping Min

Blockade of Notch1 Signaling Alleviates Murine Lupus via Blunting Macrophage Activation and M2b
Polarization
Weijuan Zhang, Wei Xu, and Sidong Xiong

Surfactant Protein-A as an Anti-Inflammatory Component in the Amnion: Implications for Human Pregnancy
Deug-Chan Lee, Roberto Romero, Chong Jai Kim, Tinnakorn Chaivorapongsa, Adi L. Tarca, JoonHo Lee,
Yeon-Lim Sub, Shali Mazaki-Tovi, Edi Vaibuch, Pooja Mittal, Sorin Draghici, Offer Erez, Juan Pedro Kusanovic,
Sonia S. Hasan, and Jung-Sun Kim

Mycobacterium tuberculosis Upregulates Microglial Matrix Metalloproteinase-1 and -3 Expression and
Secretion via NF-κB– and Activator Protein-1–Dependent Monocyte Networks
Justin A. Green, Paul T. Elkingston, Caroline J. Pennington, Frederico Roncoroli, Shruti Dholakia, Rachel C. Moores,
Anwen Bullen, Joanna C. Porter, Dan Agranoff, Dylan R. Edwards, and Jon S. Friedland
Cytotoxic Potential of Lung CD8+ T Cells Increases with Chronic Obstructive Pulmonary Disease Severity and with In Vitro Stimulation by IL-18 or IL-15
Christine M. Freeman, MeiLan K. Han, Fernando J. Martinez, Su san Murray, Lyrica X. Liu, Stephen W. Chen se, Timothy J. Polak, Joanne Sonstein, Jill C. Teds, Theresa M. Ames, Douglas A. Arenberg, Catherine A. Meldrum, Christi Getty, Lisa McCloskey, and Jeffrey L. Curtis

Conditional Superagonist CTL Ligands for the Promotion of Tumor-Specific CTL Responses
C. Siddiq Abdul-Alim, Yongqing Li, and Cassian Yee

DAP12 Is Required for Macrophage Recruitment to the Lung in Response to Cigarette Smoke and Chemotaxis toward CCL2
Laura L. Koth, C. J. Cambier, Abmut Ellicvanger, Margaret Solon, Lydia Hou, Lewis L. Lanier, Clare L. Abram, Jessica A. Hamerman, and Prescott G. Woodruff

Novel SHP-1 Inhibitors Tyrosine Phosphatase Inhibitor-1 and Analogs with Preclinical Anti-Tumor Activities as Tolerated Oral Agents
Suman Kundu, Keke Fan, Mingli Cao, Daniel J. Lindner, Zhizhaung Joe Zhao, Ernest Borden, and Taolin Yi

Polyfunctional CD4+ and CD8+ T Cell Responses to Tuberculosis Antigens in HIV-1–Infected Patients before and after Anti-Retroviral Treatment
Jayne S. Sutherland, James M. Young, Kevin L. Peterson, Bakary Sanneh, Hilton C. Whittle, Sarah L. Rowland-Jones, Richard A. Adegbola, A san J ay, and Martin O. C. Ota

LAG-3 Expression Defines a Subset of CD4+CD25highFoxp3+ Regulatory T Cells That Are Expanded at Tumor Sites
Chiara Camisaschi, Chiara Casati, Francesca Rini, Michela Perego, Annamaria De Filippo, Frédéric Triebel, Giorgio Parmiani, Filiberto Belli, Licia Rivoltini, and Chiara Castelli

LETTERS OF RETRACTION

Retraction: Naturally Occurring Human IgM Antibody That Binds B7-DC and Potentiates T Cell Stimulation by Dendritic Cells

Retraction: Blockade of Allergic Airway Inflammation Following Systemic Treatment with a B7-Dendritic Cell (PD-L2) Cross-Linking Human Antibody
Koji Iijima, Takao Kobayashi, Moses Rodriguez, Hirohito Kita, and Larry R. Pease

Retraction: B7-DC/PD-L2 Cross-Linking Induces NF-κB-Dependent Protection of Dendritic Cells from Cell Death
Loc T. Nguyen, Bogoljub Ciric, Virginia P. Van Keulen, and Larry R. Pease

Retraction: Induction of a Th1 Response from Th2-Polarized T Cells by Activated Dendritic Cells: Dependence on TCR:Peptide-MHC Interaction, ICAM-1, IL-12, and IFN-γ
Karla R. Wiehagen, Vesna Pulko, Virginia Van Keulen, William A. Faubion, Keith L. Knutson, and Larry R. Pease

Retraction: Reprogrammed FoxP3+ T Regulatory Cells Become IL-17+ Antigen-Specific Autoimmune Effectors In Vitro and In Vivo
Rosalyn Cabrera, Erin L. Schenk, Pilar Nava-Parada, Michael P. Bell, Virginia P. Van Keulen, Ronald J. Marler, Sara J. Felts, and Larry R. Pease

Retraction: TREM-2 Mediated Signaling Induces Antigen Uptake and Retention in Mature Myeloid Dendritic Cells
Laura N. Arneson, Jadee L. Upshaw, Charles L. Howe, Sara J. Felts, Marco Colonna, Moses Rodriguez, and Larry R. Pease

AUTHOR INDEX