This information is current as of April 12, 2017.
In This Issue

Pillars of Immunology

7483 A Nuclear Factor in B Cells and Beyond
Michael J. May

Ranjan Sen and David Baltimore

Brief Reviews

7497 DUSP Meet Immunology: Dual Specificity MAPK Phosphatases in Control of the Inflammatory Response
Roland Lang, Michael Hammer, and Jörg Mages

Cutting Edge

7505 Cutting Edge: TLR3 Stimulation Suppresses Experimental Autoimmune Encephalomyelitis by Inducing Endogenous IFN-β
Tarik Touil, Denise Fitzgerald, Guang-Xian Zhang, Abdolmohamad Rostami, and Bruno Gran

7510 Cutting Edge: Plasmacytoid Dendritic Cells Provide Innate Immune Protection against Mucosal Viral Infection In Situ
Jennifer M. Lund, Melissa M. Linehan, Norifumi Iijima, and Akiko Iwasaki

7515 Cutting Edge: IL-12 Inversely Regulates T-bet and Eomesodermin Expression during Pathogen-Induced CD8+ T Cell Differentiation
Naofumi Takemoto, Andrew M. Intlekofer, John T. Northrup, E. John Wherry, and Steven L. Reiner

7520 Cutting Edge: Pivotal Function of Ubc13 in Thymocyte TCR Signaling
Masahiro Yamamoto, Shintaro Sato, Tatsuya Saitoh, Hiroaki Sakurai, Satoshi Uematsu, Taro Kawai, Ken J. Ishii, Osamu Takeuchi, and Shizuo Akira

7525 Cutting Edge: Stimulation of Dopamine D4 Receptors Induce T Cell Quiescence by Up-Regulating Krüppel-Like Factor-2 Expression through Inhibition of ERK1/ERK2 Phosphorylation
Chandrani Sarkar, Shamik Das, Debanjan Chakroborty, Uttio Roy Chowdhury, Biswarup Basu, Partha Sarathi Dasgupta, and Sujit Basu

On the cover: Significant IgA production is shown in cryosections from the rolled up small intestine of a wild-type mouse. The intestine contains many IgA-positive cells (green) and a single isolated lymphoid follicle cluster brightly stained for IgM+ cells (red). Bergqvist, P., E. Gärdeb, A. Stensson, M. Bemark, and N. Y. Lycke. 2006. Gut IgA class switch recombination in the absence of CD40 does not occur in the lamina propria and is independent of germinal centers. J. Immunol. 177: 7772–7783.

The Journal of Immunology (ISSN 0022-1767) is published twice each month by The American Association of Immunologists, Inc., 9650 Rockville Pike, Bethesda, MD 20814-3994. Subscription term: New subscriptions and renewals begin January 1 and expire one year later (see http://www.jimmunol.org/subscriptions for prices and details). A special rate is available to members of The American Association of Immunologists, Inc. (see http://www.aai.org/membership). Periodicals postage paid at Bethesda, MD 20814-3998, and at additional mailing offices. Country of origin U.S.A. Printed on acid-free recyclable paper. Postmaster: Send address changes to The Journal of Immunology, Subscription Department, Room L-2407A, 9650 Rockville Pike, Bethesda, MD 20814-3998. Copyright © 2006 by The American Association of Immunologists, Inc.
Cytotoxic T Lymphocytes Induce Caspase-Dependent and -Independent Cell Death in Neuroblastomas in a MHC-Nonrestricted Fashion
Anna De Geer, Rolf Kiessling, Victor Levitsky, and Jelena Levitskaya

Macrophages and Myeloid Dendritic Cells, but Not Plasmacytoid Dendritic Cells, Produce IL-10 in Response to MyD88- and TRIF-Dependent TLR Signals, and TRL-Independent Signals
André Boonstra, Ricardo Rajabouni, Mary Holman, Rute Marques, Carine Ausetin-Paturel, João Pedro Pereira, Elizabeth E. M. Bates, Shizuo Akira, Yong-Jun Liu, Giorgio Trinchieri, and Anne O’Garra

A Novel E3 Ubiquitin Ligase Substrate Screen Identifies Rho Guanine Dissociation Inhibitor as a Substrate of Gene Related to Anergy in Lymphocytes
Leon Su, Neil Lineberry, Yu Dh, Luis Soares, and C. Garrison Fathman

Paternal Antigen-Bearing Cells Transferred during Insemination Do Not Stimulate Anti-Paternal CD8+ T Cells: Role of Estradiol in Locally Inhibiting CD8+ T Cell Responses
Matthew M. Seavey and Tim R. Mosmann

IL-27 Induces Th1 Differentiation via p38 MAPK/T-bet- and Inter cellular Adhesion Molecule-1/LFA-1/ERK1/2-Dependent Pathways
Toshiyuki Owaki, Masayuki Asakawa, Fumio Fukai, Junichiro Mizuguchi, and Takayuki Yoshimoto

Loss of Invariant Chain Protects Nonobese Diabetic Mice against Type 1 Diabetes
Richard J. Mellanby, Chad H. Koonce, Anthony Monti, Jenny M. Phillips, Anne Cooke, and Elizabeth K. Bikoff

The Chemokine CX3CL1 Reduces Migration and Increases Adhesion of Neurons with Mechanisms Dependent on the β1 Integrin Subunit
Clotilde Lauro, Myriam Catalano, Flavia Trettel, Fabrizio Mainiero, Maria Teresa Ciotti, Fabrizio Eusebi, and Cristina Limatola

ERK5 Activates NF-κB in Leukemic T Cells and Is Essential for Their Growth In Vivo
Johan Garasde, Seyma Cherni, Sandra Kaminski, Etienne Delepine, Christine Chable-Bessia, Monsef Benkirane, Joana Borges, Atanatio Pandiella, Miguel Angel Itiéz, Manuel Fresno, Robert A. Hipkoff, and Martin Villalba

IL-12-Programmed Long-Term CD8+ T Cell Responses Require STAT4
Qingsheng Li, Cheryl Eppolito, Kunle Odunsi, and Protul A. Shrikant

Distinct and Non-Overlapping T Cell Receptor Repertoires Expanded by DNA Vaccination in Wild-Type and HER-2 Transgenic BALB/c Mice
Simona Rolla, Chiara Nicolo, Silvia Malinarich, Massimiliano Orsini, Guido Forni, Federica Cavallo, and Francesco Ria

Oral Tolerance Induction with Antigen Conjugated to Cholera Toxin B Subunit Generates Both Foxp3+CD25+ and Foxp3−CD25−CD4+ Regulatory T Cells
Jia-Bin Sun, Sukanya Raghavan, Asa Sjöling, Samuel Lundin, and Jan Holmgren

Regulation of Immunity by a Novel Population of Qa-1-Restricted CD8αα+ TCRαβ+ T Cells
Xiaolei Tang, Igor Maricic, Nikunj Purohit, Berge Bakamjian, Lisa M. Reed-Loisel, Tara Beeston, Peter Jensen, and Vipin Kumar

Regulation of Th2 Cell Development by Polycomb Group Gene bmi-1 through the Stabilization of GATA3
Hiroyuki Hoshikawa, Motoko Y. Kimuma, Ryo Shimakatsu, Akane Suzuki, Takako Miki, Haruhiko Koseki, Maarten van Lohuizen, Masakatsu Yamashita, and Toshinori Nakayama

Oncostatin M Enhances CCL21 Expression by Microvascular Endothelial Cells and Increases the Efficiency of Dendritic Cell Trafficking to Lymph Nodes
Makoto Sugaya, Lei Fang, Adela R. Cardones, Takeshi Kakinuma, Samer H. Jaber, Andrew Blauvelt, and Sam T. Hwang

Microenvironment-Dependent Requirement of STAT4 for the Induction of P-Selectin Ligands and Effector Cytokines on CD4+ T Cells in Healthy and Parasite-Infected Mice
Uta Syrb, Ute Hoffmann, Kerstin Schlawe, Oliver Liesenfeld, Klaus Erb, and Alf Hamann
Immunoproteasome Subunit Deficiencies Impact Differentially on Two Immunodominant Influenza Virus-Specific CD8+ T Cell Responses
Ken C. Pang, Megan T. Sanders, John J. Monaco, Peter C. Doherty, Stephen J. Turner, and Weisan Chen

Cyclosporin A Abolishes CD28-Mediated Resistance to CD95-Induced Apoptosis via Superinduction of Caspase-3
Andreas Kerstan, Nicole Armbruster, Martin Leverkus, and Thomas Hünig

Control of Memory CD4 T Cell Recall by the CD28/B7 Costimulatory Pathway
Modesta P. Ndejembi, John R. Teijaro, Deepa S. Patke, Adam W. Bingaman, Meena R. Chandok, Agnes Azimzadeh, Steven G. Nadler, and Donna L. Farber

Talin1 Regulates TCR-Mediated LFA-1 Function
William T. N. Simonson, Santos J. Franco, and Anna Hüttenlocher

B Cell-Mediated Antigen Presentation Is Required for the Pathogenesis of Acute Cardiac Allograft Rejection
Hooman Noorchashm, Amy J. Reed, Suwan Y. Rostami, Raha Mozaffari, Ghazal Zekavat, Brigitte Koetherlein, Andrew J. Caton, and Ali Naji

Imprinting the Fate of Antigen-Reactive B Cells through the Affinity of the B Cell Receptor

Expression of Integrin β3 Is Correlated to the Properties of Quiescent Hemopoietic Stem Cells Possessing the Side Population Phenotype
Terumasa Umemoto, Masayuki Yamato, Yoshiko Shiratsuchi, Masao Terasawa, Joseph Yang, Kohji Nishida, Yoshio Kobayashi, and Teruo Okano

TLR2/TLR4-Independent Neutrophil Activation and Recruitment upon Endocytosis of Nucleosomes Reveals a New Pathway of Innate Immunity in Systemic Lupus Erythematosus
Viktoria M. Rönnefarth, Annika I. M. Erbacher, Tobias Lamkemeyer, Johannes Madlung, Alfred Nordheim, Hans-Georg Rammensee, and Patrice Decker

Dendritic Cells Amplify T Cell-Mediated Immune Responses in the Central Nervous System
Jozsef Karman, Hamlet H. Chu, Dominic O. Co, Christine M. Seroogy, Matyas Sandor, and Zsuzsanna Fabry

IL-10 Inhibits Lipopolysaccharide-Induced CD40 Gene Expression through Induction of Suppressor of Cytokine Signaling-3
Hongwei Qin, Cynthia A. Wilson, Kevin L. Roberts, Brandi J. Baker, Xueyan Zhao, and Eitty N. Benveniste

Gut IgA Class Switch Recombination in the Absence of CD40 Does Not Occur in the Lamina Propria and Is Independent of Germinal Centers
Peter Bergqvist, Eva Gärđby, Anneli Stenson, Mats Bemark, and Nils Y. Lycke

Characterization of Myeloid and Plasmacytoid Dendritic Cells in Human Lung
Barbara J. Masten, Guyneth K. Olson, Christy A. Tarleton, Chad Rand, Mark Schuyler, Reza Mehran, Tereasa Archibeque, and Mary F. Lipscomb

Regulation of Dendritic Cell Function and T Cell Priming by the Fatty Acid-Binding Protein aP2
Michael S. Rolph, Timothy R. Young, Bennett O. V. Shum, Ceen Z. Gorgun, Carien Schmitz-Peiffer, Ian A. Ramsbaw, Gökhan S. Hotamisligil, and Charles R. Mackay

Generation and Growth of CD28nullCD8+ Memory T Cells Mediated by IL-15 and Its Induced Cytokines
Wai Kan Chiu, Monchou Fann, and Nan-ping Weng

Cyclooxygenase-2 Inhibition Attenuates Antibody Responses against Human Papillomavirus-Like Particles
Elizabeth P. Ryan, Christine M. Malboeuf, Matthew Bernard, Robert C. Rose, and Richard P. Phipps
A Regulatory CD4\(^+\) T Cell Subset in the BB Rat Model of Autoimmune Diabetes Expresses Neither CD25 Nor Foxp3

Jan-Luuk Hillebrands, Barbara Whalen, Jeroen T. J. Viuier, Jasper Koning, Kenneth D. Bishop, Jean Leif, Jan Rozing, John P. Murdes, Dale L. Greiner, and Aldo A. Rossini

Evidence for NK Cell Subsets Based on Chemokine Receptor Expression


IFN-\(\beta\)-Mediated Up-Regulation of CD1d in Bacteria-Infected APCs

Gayatri Raghuraman, Yanbiao Geng, and Chyung-Ru Wang

Heat Shock Protein 70 Is Secreted from Tumor Cells by a Nonclassical Pathway Involving Lysosomal Endosomes

Salamatu S. Mambula and Stuart K. Calderwood

Spontaneous Large-Scale Lymphoid Neogenesis and Balanced Autoimmunity versus Tolerance in the Stomach of H\(^+\)/K\(^+\)-ATPase-Reactive TCR Transgenic Mouse

Tomoya Katakai, Takashi Nomura, Hiroyuki Gonda, Manabu Sugai, Yasutoshi Agata, Akiyoshi Nishio, Tohru Masuda, Shimon Sakaguchi, and Akira Shimizu

Microarrays Reveal Distinct Gene Signatures in the Thymus of Seropositive and Seronegative Myasthenia Gravis Patients and the Role of CC Chemokine Ligand 21 in Thymic Hyperplasia

Rozen Le Panse, Gérardine Cizeron-Clairac, Jacky Bismuth, and Sonia Berrih-Aknin

General Nature of the STAT3-Activated Anti-Inflammatory Response


MOLECULAR AND STRUCTURAL IMMUNOLOGY

Nucleocytoplasmic Shuttling of HMGB1 Is Regulated by Phosphorylation That Redirects It toward Secretion

Ju Ho Youn and Jeon-Soo Shin

IFN Regulatory Factor 4 and 8 Promote Ig Light Chain \(\kappa\) Locus Activation in Pre-B Cell Development

Shibin Ma, Anna Turetsky, Long Trinh, and Runqing Lu

Allergy-Driven Alternative Splicing of IL-13 Receptor \(\alpha_2\) Yields Distinct Membrane and Soluble Forms

Yasuhiro Tabata, Weiguo Chen, Manoj R. Warrier, Aaron M. Gibson, Michael O. Daines, and Gurjit K. Khurana Hershey

Analysis of the Individual Contributions of Ig\(\alpha\) (CD79a)- and Ig\(\beta\) (CD79b)-Mediated Tonic Signaling for Bone Marrow B Cell Development and Peripheral B Cell Maturation

Ezequiel M. Fuentes-Panana, Gregory Bannish, Fredrick G. Karnell, John F. Treml, and John G. Monroe

IMMUNOGENETICS

Mapping of Quantitative Trait Loci Determining NK Cell-Mediated Resistance to MHC Class I-Deficient Bone Marrow Grafts in Perforin-Deficient Mice

Maria H. Johansson, Mesha A. Taylor, Maja Jagodic, Katalin Tus, John D. Schatzle, Edward K. Wakeland, and Michael Bennett

HOST DEFENSE

Gene Expression Profiling Reveals Unique Pathways Associated with Differential Severity of Lyme Arthritis

Hillary Crandall, Diane M. Dunn, Ying Ma, R. Mark Wooten, James F. Zachary, John H. Weis, Robert B. Weiss, and Janis J. Weis

Increased Natural CD4\(^+\)CD25\(^+\) Regulatory T Cells and Their Suppressor Activity Do Not Contribute to Mortality in Murine Polymicrobial Sepsis

Philip O. Scumpia, Matthew J. Delano, Kindra M. Kelly, Kerri A. O’Malley, Philip A. Efron, Priscilla F. McAuliffe, Todd Brusko, Ricardo Ungaro, Tolga Barker, James L. Wynn, Mark A. Atkinson, Westley H. Reeves, Michael J. Clare Salzler, and Lyle L. Moldawer
TLR4-Dependent NF-κB Activation and Mitogen- and Stress-Activated Protein Kinase 1-Triggered Phosphorylation Events Are Central to Helicobacter pylori Peptidyl Prolyl cis-, trans-Isomerase (HP0175)-Mediated Induction of IL-6 Release from Macrophages

Sushil Kumar Pathak, Sanchita Basu, Aisima Bhattacharyya, Shresh Pathak, Anirban Banerjee, Joyoti Basu, and Manikuntala Kundu

Human Langerhans Cells Express a Specific TLR Profile and Differentially Respond to Viruses and Gram-Positive Bacteria

Vincent Flacher, Marielle Bouachbacher, Estelle Verronne, Catherine Massacrier, Vanja Sisirak, Odile Berthier-Vergnes, Blainide de Saint-Vi, Christophe Cau, Colette Dezzatu-Dambuyant, Serge Lebecque, and Jenny Valladeau

The Role of TCR Engagement and Activation-Induced Cell Death in Sepsis-Induced T Cell Apoptosis

Jacqueline Unsinger, John M. Herndon, Christopher G. Davis, Jared T. Muenzer, Richard S. Hotchkiss, and Thomas A. Ferguson

Antigen-Specific CD8⁺ T Cells Respond to Chlamydia trachomatis in the Genital Mucosa

Nadia R. Roan and Michael N. Starnbach

TLR4 Mediates Vaccine-Induced Protective Cellular Immunity to Bordetella pertussis: Role of IL-17-Producing T Cells


Interleukin-8 Induction by Helicobacter pylori in Gastric Epithelial Cells is Dependent on Apurinic/Apyrimidinic Endonuclease-1/Redox Factor-1


Pseudomonas aeruginosa-Induced Human Mast Cell Apoptosis Associated with Up-Regulation of Endogenous Bcl-x and Down-Regulation of Bcl-x

Christopher E. Jenkins, Ania Swiatonikoski, Melanie R. Power, and Tong-Jun Lin

The IFN-Independent Response to Virus Particle Entry Provides a First Line of Antiviral Defense That Is Independent of TLRs and Retinoic Acid-Inducible Gene 1

Patrick Paladino, Derek T. Cummings, Ryan S. Joyce, and Karen L. Mossman

A New Staphylococcal Anti-Inflammatory Protein That Antagonizes the Formyl Peptide Receptor-Like 1

Cristina Prat, Jasanka Bestebroer, Carla J. C. de Haas, Jos A. G. van Strijp, and Kok P. M. van Kessel

Direct CD28 Costimulation Is Required for CD8⁺ T Cell-Mediated Resistance to an Acute Viral Disease in a Natural Host

Min Fang and Luis J. Sigal

An HLA-A2.1-Transgenic Rabbit Model to Study Immunity to Papillomavirus Infection

Jiafen Hu, Xuwen Peng, Todd D. Schell, Lynn R. Budgeon, Nancy M. Cladel, and Neil D. Christensen

INFLAMMATION

The Tumor-Promoting Effect of TNF-α Involves the Induction of Secretory Leukocyte Protease Inhibitor

Nick Devaughd, Hilde Revi, Anne Kinok, Yuan Qing Liu, Patrick De Baetselier, and Gholamreza Hassanzadeh Ghassabeh

CXCL12 Limits Inflammation by Localizing Mononuclear Infiltrates to the Perivascular Space during Experimental Autoimmune Encephalomyelitis

Erin E. McCandless, Qiuling Wang, B. Mark Woerner, James M. Harper, and Robyn S. Klein

Attenuating Burn Wound Inflammatory Signaling Reduces Systemic Inflammation and Acute Lung Injury


Macrophage Migration Inhibitory Factor Induces Macrophage Recruitment via CC Chemokine Ligand 2

Julia L. Gregory, Eric F. Morand, Sonja J. McKeown, Jennifer A. Ralph, Pamela Hall, Yuan H. Yang, Shawn R. McColl, and Michael J. Hickey
The Differing Roles of the Classical and Mannose-Binding Lectin Complement Pathways in the Events following Skeletal Muscle Ischemia-Reperfusion

The Duffy Antigen Modifies Systemic and Local Tissue Chemokine Responses following Lipopolysaccharide Stimulation

Translational Regulation of Autoimmune Inflammation and Lymphoma Genesis by Programmed Cell Death 4
Anja Hilliard, Brendan Hilliard, Shi-Jun Zheng, Honghong Sun, Takashi Miwa, Wenchao Song, Rüdiger Göke, and Youhai H. Chen

Annexin 1 Negatively Regulates IL-6 Expression via Effects on p38 MAPK and MAPK Phosphatase-1
Yuan H. Yang, Myew-Ling Toh, Colin D. Clyne, Michelle Leech, Daniel Aeberli, Jin Xue, April Dacumos, Laveena Sharma, and Eric F. Morand

The Role of TLR2 In Vivo following Challenge with Staphylococcus aureus and Prototypic Ligands
Sarah C. Mullady and Paul Kubes

Clinical Immunology

Antigen-Specific Central Memory CD4+ T Lymphocytes Produce Multiple Cytokines and Proliferate In Vivo in Humans
Muriel Stubbe, Nathalie Vanderheyde, Michel Goldman, and Arnaud Marchant

CD8-Mediated Type 1 Antitumor Responses Selectively Modulate Endogenous Differentiated and Nondifferentiated T Cell Localization, Activation, and Function in Progressive Breast Cancer
Mark J. Dobrzanski, Joyce B. Reome, James C. Hylind, and Kathleen A. Rewers-Felkins
8202 IRAK-4 Mutation (Q293X): Rapid Detection and Characterization of Defective Post-Transcriptional TLR/IL-1R Responses in Human Myeloid and Non-Myeloid Cells
Donald J. Davidson, Andrew J. Currie, Dawn M. E. Bowdish, Kelly L. Brown, Carrie M. Rosenberger, Rebecca C. Ma, Johan Bylund, Paul A. Campsall, Anne Puel, Capucine Picard, Jean-Laurent Casanova, Stuart E. Turvey, Robert E. W. Hancock, Rebecca S. Devon, and David P. Speert

8212 Spontaneous CD8 T Cell Responses against the Melanocyte Differentiation Antigen RAB38/NY-MEL-1 in Melanoma Patients
Senta M. Walton, Marco Gerlinger, Olga de la Rosa, Natko Nuber, Ashley Knights, Anna Gati, Monika Laumer, Laura Straus, Carolin Exner, Niklaus Schäfer, Mirjana Urosevic, Reinhard Dummer, Jean-Marie Tiery, Andreas Mackensen, Elke Jaeger, Frédéric Lévy, Alexander Knuth, Dirk Jäger, and Alfred Zippelius

8219 Antibodies against the Activated Coagulation Factor X (FXa) in the Antiphospholipid Syndrome That Interfere with the FXa Inactivation by Antithrombin
Yao-Hsu Yang, Kwan-Ki Huang, John FitzGerald, Jennifer M. Grossman, Mihaela Taylor, Bevra H. Hahn, and Pojen P. Chen

8226 Synovial Autoreactive T Cells in Rheumatoid Arthritis Resist IDO-Mediated Inhibition
Lingqiao Zhu, Fang Ji, Yuan Wang, Yi Zhang, Qiang Liu, Jingwu Z. Zhang, Kouji Matsushima, Qi Cao, and Yanyun Zhang

8234 Antibodies against the Activated Coagulation Factor X (FXa) in the Antiphospholipid Syndrome That Interfere with the FXa Inactivation by Antithrombin
Yao-Hsu Yang, Kwan-Ki Huang, John FitzGerald, Jennifer M. Grossman, Mihaela Taylor, Bevra H. Hahn, and Pojen P. Chen

8241 Coadministration of Plasmid DNA Constructs Encoding an Encephalitogenic Determinant and IL-10 Elicits Regulatory T Cell-Mediated Protective Immunity in the Central Nervous System
Sagie Schif-Zuck, Gizi Wildbaum, and Nathan Karin

8248 Stability and Translation of TCR \( \gamma \) mRNA Are Regulated by the Adenosine-Uridine-Rich Elements in Splice-Deleted 3′ Untranslated Region of \( \gamma \)-Chain
Bhabadeb Chowdhury, Sandeep Krishnan, Christos G. Tsokos, James W. Robertson, Carolyn U. Fisher, Madhusoodana P. Nambiar, and George C. Tsokos

8258 Role for Nephritogenic T Cells in Lupus Glomerulonephritis: Progression to Renal Failure Is Accompanied by T Cell Activation and Expansion in Regional Lymph Nodes
Harini Bagavant, Umesh S. Deshmukh, Hongyang Wang, Timothy Ly, and Shu Man Fu

8266 IL-22-Mediated Tumor Growth Reduction Correlates with Inhibition of ERK1/2 and AKT Phosphorylation and Induction of Cell Cycle Arrest in the G2/M Phase
Georg F. Weber, Florian C. Gaertner, Wolfgang Erl, Klaus-Peter Janssen, Birgit Blechert, Bernhard Holzmann, Heike Weighardt, and Markus Eder

8273 Author Index
8277 AAI Membership Application
8278 AAI Trainee Membership Application