IN THIS ISSUE

5781 Young Thymus Identity Crisis See article p. 5858
Chaperoning Cross-Presentation See article p. 6010
GANP and APOBEC3G Gang Up on HIV See article p. 6030
Neuropeptide Plots against Microbes See article p. 6040
Collecting Complexes for Complement See article p. 6117
Macrophage Trex Dampens Inflammation See article p. 6128

LETTERS TO THE EDITOR

5783 Comment on “Reduced T-Dependent Humoral Immunity in CD20-Deficient Mice”
José Golay

TRANSLATING IMMUNOLOGY

5785 Calcineurin Inhibitors: 40 Years Later, Can’t Live Without ... Jamil R. Azzi, Mohamed H. Sayegh, and Samir G. Mallat

CUTTING EDGE

5793 Cutting Edge: Central Memory CD8 T Cells in Aged Mice Are Virtual Memory Cells
Bo-Chin Chiu, Brian E. Martin, Valerie R. Stolberg, and Stephen W. Chensue

5797 Cutting Edge: The Signals for the Generation of T Cell Memory Are Qualitatively Different Depending on TCR Ligand Strength
Karin M. Knudsen, Sara E. Hamilton, Mark A. Daniels, Stephen C. Jameison, and Emma Teixeiro

5802 Cutting Edge: Hypoxia-Induced Nanog Favors the Intratumoral Infiltration of Regulatory T Cells and Macrophages via Direct Regulation of TGF-β1
Meriem Hasmim, Muhammad Zaeem Noman, Yosa Mesai, Didier Bordereaux, Gwendoline Gro, Veronique Baud, and Salem Chouaib

On the cover: Predicted interaction of the defense endogenous neuropeptide urocortin II (UCNII) and the bacterial lipopolisacharide (LPS). The polysaccharide moiety of the two LPS-interacting clusters (red and green structures) bind with high affinity with the same surface of UCNII (gray), which concentrates the cationic residues orientated in that side of the molecule. Campos-Salinas, J., M. Caro, A. Cavazzuti, I. Forse-Lago, S. M. Beverley, F. O’Valle, and E. Gonzalez-Rey. 2013. Protective role of the neuropeptide urocortin II against experimental sepsis and leishmaniasis by direct killing of pathogens. J. Immunol. 191: 6040–6051

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, Phone: 301-634-7197, Fax: 301-634-7829. Subscription terms: 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). The American Association of Immunologists, Inc., is not responsible for undeliverable issues. Replacement issues can be obtained, if available, at the regular price of single issues (see http://www.jimmunol.org/pdf/single_issue_purchase.pdf). Reprints of individual articles are available only from authors. Periodicals postage paid at Bethesda, MD 20814-3994, and at additional mailing offices. Country of origin U.S.A. Printed on acid-free recyclable paper. Postmaster: Send address changes 60 days in advance to The Journal of Immunology, Subscription Department, 9650 Rockville Pike, Bethesda, MD 20814-3994. Copyright © 2013 by The American Association of Immunologists, Inc.
5807 Cutting Edge: Leukotriene C₄ Activates Mouse Platelets in Plasma Exclusively through the Type 2 Cysteiny1 Leukotriene Receptor
Hannah E. Cummings, Tao Liu, Chunli Feng, Tanya M. Laidlaw, Pamela B. Conley, Yoshihide Kanaoka, and Joshua A. Boyce

ALLERGY AND OTHER HYPERSENSITIVITIES

5811 Epithelial NF-κB Orchestrates House Dust Mite–Induced Airway Inflammation, Hyperresponsiveness, and Fibrotic Remodeling

ANTIGEN RECOGNITION AND RESPONSES

5822 Coupled IL-2–Dependent Extracellular Feedbacks Govern Two Distinct Consecutive Phases of CD4 T Cell Activation
Nir Waysbort, Dor Russ, Benjamin M. Chain, and Nir Friedman

5831 HLA Class I Alleles Are Associated with Peptide-Binding Repertoires of Different Size, Affinity, and Immunogenicity
Sinu Paul, Daniela Weiskopf, Michael A. Angelo, John Sidney, Bjoern Peters, and Alessandro Sette

AUTOIMMUNITY

5840 AID and Caspase 8 Shape the Germinal Center Response through Apoptosis
Bryant Boulianne, Olga L. Rojas, Dania Haddad, Ahmad Zafeen, Anat Kapelnikov, Thanh Nguyen, Conglei Li, Razq Hakem, Jennifer L. Gommerman, and Alberto Martin

CLINICAL AND HUMAN IMMUNOLOGY

5848 The Kinetics of Myelin Antigen Uptake by Myeloid Cells in the Central Nervous System during Experimental Autoimmune Encephalomyelitis
Rebecca A. Sosa, Cathi Murphey, Niannian Ji, Astrid E. Cardona, and Thomas G. Forsthuber

5858 Thymic Development of Autoreactive T Cells in NOD Mice Is Regulated in an Age-Dependent Manner
Qiuming He, Y. Maurice Morillon, II, Nicholas A. Spidale, Charles J. Kroger, Bo Liu, R. Balfour Sartor, Bo Wang, and Roland Tisch

IMMUNE REGULATION

5857 Antigen-Specific Induced T Regulatory Cells Impair Dendritic Cell Function via an IL-10/MARCH1–Dependent Mechanism
Gouri Chattopadhyay and Ethan M. Shevach

5885 Calcineurin–Rcan1 Interaction Contributes to Stem Cell Factor–Mediated Mast Cell Activation
Zhengli Wu, Yanzhong Tao, Mansiba Chopra, Miluye Ahn, Karen L. Marcus, Neelima Choudhary, Hongtu Zhu, and Silva Markovic-Plese

5895 CD55 Costimulation Induces Differentiation of a Discrete T Regulatory Type 1 Cell Population with a Stable Phenotype
Rubcha V. Satavani, Richard G. Bradley, Judith M. Ramage, Andrew M. Jackson, Lindy G. Durrant, and Ian Spendlove

5904 MicroRNA-155 Tunes Both the Threshold and Extent of NK Cell Activation via Targeting of Multiple Signaling Pathways
Alveolar Macrophages Are Critical for the Inhibition of Allergic Asthma by Mesenchymal Stromal Cells
Louisa J. Mathias, Sacha M. L. Khong, Lisa Spyroglou, Natalie L. Payne, Christopher Siatskas, Alison N. Thorburn, Richard L. Boyd, and Tracy S. P. Heng

Genome-Wide Regulatory Analysis Reveals That T-bet Controls Th17 Lineage Differentiation through Direct Suppression of IRF4
M. Refik Gökmén, Rong Dong, Aditi Kanhere, Nick Powell, Esperanza Perucha, Ian Jackson, Jane K. Howard, Maria Hernandez-Fuentes, Richard G. Jenner, and Graham M. Lord

CD2-Associated Protein Regulates Plasmacytoid Dendritic Cell Migration, but Is Dispensable for Their Development and Cytokine Production
Subhashini Srivatsan, Melissa Swiecki, Karel Otero, Marina Cell, and Andrey S. Shaw

α2β1 Integrin Regulates Th17 Cell Activity and Its Neutralization Decreases the Severity of Collagen-Induced Arthritis
Mohammed-Amine El Azreq, Marc Boisvert, Annabelle Cesaro, Nathalie Pagé, Lionel Loubaki, Isabelle Allaeys, Jamila Chakir, Patrice E. Poubelle, Philippe A. Tessier, and Fawzi Aoudjit

Disturbed Follicular Architecture in B Cell A Disintegrin and Metalloproteinase (ADAM)10 Knockouts Is Mediated by Compensatory Increases in ADAM17 and TNF-α Shedding
Lauren Folgosa, Hannah B. Zellner, Mohey Eldin El Shikh, and Daniel H. Conrad

Two Types of TNF-α Exist in Teleost Fish: Phylogeny, Expression, and Bioactivity Analysis of Type-II TNF-α3 in Rainbow Trout Oncorhynchus mykiss
Suhee Hong, Ronggai Li, Qiaoqing Xu, Chris J. Secombes, and Tiehui Wang

IMMUNE SYSTEM DEVELOPMENT

Essential Functions for ID Proteins at Multiple Checkpoints in Invariant NKT Cell Development
Mihalis Verykokakis, Vena Krishnamoorthy, Antonio Iavarone, Anna laurrella, Mikael Sigvardsson, and Barbara L. Kee

The Tumor Promoter and NF-κB Modulator Bcl-3 Regulates Splenic B Cell Development
Xiaoren Zhang, Andrea Paun, Estefania Claudio, Hongshan Wang, and Ulrich Siebenlist

Bafβ and Idd2 Have a Synergistic Effect on Irfβ-Directed Classical CD8α+ Dendritic Cell Development
Hemant Jaiwal, Monika Kaushik, Rachid Songrat, Monica Gupta, Anup Dey, Rohit Verma, Keiko Ozato, and Prakashkumar Tailor

Double Positive Thymocytes Select Mucosal-Associated Invariant T Cells
Natalie Seach, Lucia Guerri, Lionel Le Bourhis, Yvonne Mburu, Yue Cui, Stéphanie Besoles, Claire Soudais, and Olivier Lantz

IMMUNOTHERAPY AND VACCINES

Enhanced Endoplasmic Reticulum Entry of Tumor Antigen Is Crucial for Cross-Presentation Induced by Dendritic Cell–Targeted Vaccination
Hongxia Wang, Xiaofei Yu, Chunqing Guo, Daming Zuo, Paul B. Fisher, John R. Subjeck, and Xiang-Yang Wang

INFECTIOUS DISEASE AND HOST RESPONSE

Staphylococcus aureus Leukotoxin GH Promotes Formation of Neutrophil Extracellular Traps
Natalia Malachowa, Scott D. Kohayashi, Brett Freedman, David W. Dorward, and Frank R. DeLeo

GAPN Interacts with APOBEC3G and Facilitates Its Encapsulation into the Virions To Reduce HIV-1 Infectivity
Kazuhiko Maeda, Sarah Ameen Almofty, Shailendra Kumar Singh, Mohammed Mansour Abbas Eid, Mayuko Shimoda, Terumasa Ikeda, Atsushi Koito, Phuong Pham, Myron F. Goodman, and Nobuo Sakaguchi

Protective Role of the Neuropeptide Urocortin II against Experimental Sepsis and Leishmaniasis by Direct Killing of Pathogens
Jenny Campos-Salinas, Marta Caro, Antonio Cavazzuti, Irene Forte-Lago, Stephen M. Beverley, Francisco O’Valle, and Elena Gonzalez-Rey
Temporal Requirements for B Cells in the Establishment of CD4 T Cell Memory
Sarah B. Mollo, Allan J. Zajac, and Laurie E. Harrington

In Vivo Blockade of the Programmed Cell Death-1 Pathway Using Soluble Recombinant PD-1-Fc Enhances CD4+ and CD8+ T Cell Responses but Has Limited Clinical Benefit
Praveen K. Amancha, Jung Joo Hong, Kenneth Rogers, Afiab A. Ansari, and Francois Villinger

Polysaccharide-Specific Memory B Cells Generated by Conjugate Vaccines in Humans Conform to the CD27+IgG+ Isotype–Switched Memory B Cell Phenotype and Require Contact-Dependent Signals from Bystander T Cells Activated by Bacterial Proteins To Differentiate into Plasma Cells
Edward T. Clarke, Neil A. Williams, Jamie Findlow, Ray Borrow, Robert S. Heyderman, and Adam Finn

INNATE IMMUNITY AND INFLAMMATION

Identification of TLR10 as a Key Mediator of the Inflammatory Response to Listeria monocytogenes in Intestinal Epithelial Cells and Macrophages
Tim Regan, Ken Nally, Ruaidhri Carmody, Aileen Houston, Fergus Shanahan, John MacSharry, and Elizabeth Brint

Adenylyl Cyclase 6 Activation Negatively Regulates TLR4 Signaling through Lipid Raft–Mediated Endocytosis
Wei Cai, Ailian Du, Kuan Feng, Xiaonan Zhao, Liu Qian, Rennolds S. Ostrom, and Congfeng Xu

An Alanine-to-Proline Mutation in the BB-Loop of TLR3 Toll/IL-1R Domain Switches Signalling Adaptor Specificity from TRIF to MyD88
Brett Verstak, Christopher J. Arnot, and Nicholas J. Gay

BANK1 Controls CpG-Induced IL-6 Secretion via a p38 and MNK1/2/eIF4E Translation Initiation Pathway
Ying-Yu Wu, Ramesh Kumar, Mohammed Shamsul Haque, Casimiro Castillejo-López, and Marta E. Alarcón-Riquelme

Heteromeric Complexes of Native Collectin Kidney 1 and Collectin Liver 1 Are Found in the Circulation with MASP’s and Activate the Complement System

The Exonuclease Trex1 Restrains Macrophage Proinflammatory Activation
Selma Pereira-Lopes, Teja Celhar, Gloria Sans-Fons, Maria Serra, Anna-Marie Fairhurst, Jorge Llobertas, and Antonio Celada

Modulation of Voltage-Dependent and Inward Rectifier Potassium Channels by 15-Epi-Lipoxin-A4 in Activated Murine Macrophages: Implications in Innate Immunity
Cristina Moreno, Patricia Prieto, Álvaro Macías, María Pimentel-Santillana, Alicia de la Cruz, Paqui G. Través, Lisardo Boscá, and Carmen Valenzuela

Mast Cells Are Dispensable for Normal and Activin-Promoted Wound Healing and Skin Carcinogenesis
Maria Antisferova, Caroline Martin, Marcel Huber, Thorsten B. Feyerabend, Anja Förster, Karin Hartmann, Hans-Reimer Rodewald, Daniel Hohl, and Sabine Werner

Fascin Confers Resistance to Listeria Infection in Dendritic Cells
Fumio Matsumura, Yoshihiko Yamakita, Val Starovoytov, and Shigeko Yamashiro

TAM Receptors Affect Adult Brain Neurogenesis by Negative Regulation of Microglial Cell Activation
Rui Ji, Shifu Tian, Helen J. Lu, Qingjun Lu, Yan Zheng, Xiaomin Wang, Jixiang Ding, Qiutang Li, and Qingsian Lu

TLR1/2 Ligand–Stimulated Mouse Liver Endothelial Cells Secrete IL-12 and Trigger CD8+ T Cell Immunity In Vitro
Jia Liu, Min Jiang, Zhiyong Ma, Kirsten K. Dietze, Gennady Zelinksky, Dongliang Yang, Ulf Dittmer, Joerg F. Schlaak, Michael Roggendorf, and Mengji Lu
Caveolin-1 Tyr\textsuperscript{14} Phosphorylation Induces Interaction with TLR4 in Endothelial Cells and Mediates MyD88-Dependent Signaling and Sepsis-Induced Lung Inflammation
Hao Jiao, Yang Zhang, Zhibo Yan, Zhen-Guo Wang, Gongjian Liu, Richard D. Minshall, Asrar B. Malik, and Guochang Hu

MOLECULAR AND STRUCTURAL IMMUNOLOGY

Malignant Transformation of CD4\textsuperscript{+} T Lymphocytes Mediated by Oncogenic Kinase NPM/ALK Recapitulates IL-2–Induced Cell Signaling and Gene Expression Reprogramming
Michal Marzec, Krysztof Halasa, Xiaobin Liu, Hong Y. Wang, Mengeng Cheng, Donald Baldwin, John W. Tobias, Stephen J. Schuster, Anders Woetmann, Qian Zhang, Suzanne D. Turner, Niels Ødum, and Mariusz A. Wasik

Focal Adhesion Kinase Negatively Regulates Lck Function Downstream of the T Cell Antigen Receptor
Nicole M. Chapman, Sean F. Connolly, Erin L. Reinh, and Jan C. D. Houtman

A Role for IRF8 in B Cell Anergy
Simanta Pathak, Shibin Ma, Vipul Shukla, and Runqing Lu

Optineurin Insufficiency Impairs IRF3 but Not NF-κB Activation in Immune Cells
Ivana Munitic, Maria Letizia Giardino Torchia, Netra Pal Meena, Guozhi Zhu, Caiyi C. Li, and Jonathan D. Ashwell

TRANSPANTATION

Differences in the Phenotype, Cytokine Gene Expression Profiles, and In Vivo Alloreactivity of T Cells Mobilized with Plerixafor Compared with G-CSF

TUMOR IMMUNOLOGY

MicroRNAs Transfer from Human Macrophages to Hepato-Carcinoma Cells and Inhibit Proliferation
Anne Aucher, Dominika Rudnicka, and Daniel M. Davis

The MAPK Pathway Is a Predominant Regulator of HLA-A Expression in Esophageal and Gastric Cancer
Kousaku Mimura, Kensuke Shiraishi, Anja Mueller, Shinichiro Izawa, Ley-Fang Kua, Jimmy So, Wei-Peng Yong, Hideki Fujii, Barbara Seliger, Rolf Kiesling, and Koji Kono

Selective Inhibition of KCa3.1 Channels Mediates Adenosine Regulation of the Motility of Human T Cells
Ameet A. Chimote, Peter Hajdu, Vladimir Kucher, Nina Boiko, Zerrin Kuras, Orsolya Szilagyi, Yeo-Heung Yun, and Laura Conforti

Melphalan-Induced Apoptosis of EBV-Transformed B Cells through Upregulation of TAp73 and XAF1 and Nuclear Import of XPA
Ga Bin Park, Yeong-Seok Kim, Daejin Kim, Seonghan Kim, Hyun-Kyung Lee, Dae-Ho Cho, Wang Jae Lee, and Dae Young Hur

CORRECTIONS

Correction: Peripheral Tissue Homing Receptors Enable T Cell Entry into Lymph Nodes and Affect the Anatomical Distribution of Memory Cells
C. Colin Brinkman, Sherin J. Rouhani, Nithya Srinivasan, and Victor H. Engelhard

AUTHOR INDEX

AD HOC REVIEWERS

AUTHOR INDEX TO VOLUME 191

SUBJECT INDEX TO VOLUME 191