IN THIS ISSUE

2037 IgE Everywhere See article p. 2069
Double Block Bolsters CD8+ T Memory See article p. 2089
IL-33 Helps Crack Rotten Eggs See article p. 2140
Phosphatase Phools with Monocyte Migration See article p. 2168
DCs’ Gut Instinct for HIV Infection See article p. 2415

LETTERS TO THE EDITOR

2039 Comment on “IgH Chain Class Switch Recombination: Mechanism and Regulation”
Alexis Saintamand, Jean Claude Lecron, Franck Morel, Michel Cogné, and Yves Denizot

2040 Response to Comment on “IgH Chain Class Switch Recombination: Mechanism and Regulation”
Janet Stavnezer and Carol E. Schrader

PILLARS OF IMMUNOLOGY

2041 The DNA Deamination Model of Somatic Antibody Diversification
Klaus Rajewsky

Svend K. Petersen-Mahrt, Reuben S. Harris, and Michael S. Neuberger

BRIEF REVIEWS

2049 Tapping CD4 T Cells for Cancer Immunotherapy: The Choice of Personalized Genomics
Maurizio Zanetti

CUTTING EDGE

2059 Cutting Edge: CD69 Interference with Sphingosine-1-Phosphate Receptor Function Regulates Peripheral T Cell Retention
Laura K. Mackay, Asolina Braun, Bethany L. Macleod, Nicholas Collins, Christina Tebartz, Sammy Bedoui, Francis R. Carbone, and Thomas Gebhardt

On the cover: Confocal microscopy of the inguinal lymph node (LN) of G184S KI bone marrow–reconstituted mouse. LNs were fixed and immunostained with directly fluorescently labeled Abs recognizing B220 (green), CD4 (blue), Ki67 (pink), CD169 (red), and CD21/35 (turquoise). The captured image is focused on one of the LN follicles and the adjacent T cell zone from the tiled entire LN image. Hwang, I.-Y., C. Park, K. Harrison, C. Boularan, C. Galés, and J. H. Kehrl. 2015. An essential role for RGS protein/Gαi2 interactions in B lymphocyte–directed cell migration and trafficking. J. Immunol. 194: 2128–2139.
ALLERGY AND OTHER HYPERSENSITIVITIES

2069 High-Density IgE Recognition of the Major Grass Pollen Allergen Phl p 1 Revealed with Single-Chain IgE Antibody Fragments Obtained by Combinatorial Cloning
Christoph Madritsch, Elisabeth Gademayer, Uwe W. Roder, Christian Lupinek, Rudolf Valenta, and Sabine Flicker

AUTOIMMUNITY

2099 IL-15 Amplifies the Pathogenic Properties of CD4⁺CD28⁻ T Cells in Multiple Sclerosis
Bieke Broux, Mark R. Mizee, Marjain Vanheusden, Suanne van der Pol, Jack van Horsen, Bart Van Wijmeersch, Veerle Somers, Helga E. de Vries, Piet Stinissen, and Niels Hellings

IMMUNE REGULATION

2128 An Essential Role for RGS Protein/G α i2 Interactions in B Lymphocyte–Directed Cell Migration and Trafficking
Il-Young Hwang, Chung Park, Kathleen Harrison, Cedric Boularan, Céline Galès, and John H. Kehrl

2160 Ndfip1 Regulates Itch Ligase Activity and Airway Inflammation via UbcH7
Mahesh Kathania, Minghui Zeng, Viveka Nand Yadav, Sayed Javad Moghaddam, Baoli Yang, and K Venuprasad

2180 Nonapoptotic and Extracellular Activity of Granzyme B Mediates Resistance to Regulatory T Cell (Treg) Suppression by HLA-DR⁺CD25 hiCD127 lo Tregs in Multiple Sclerosis and in Response to IL-6
Siddheshvar Bhela, Christine Kempfell, Monali Manohar, Margarita Dominguez-Villar, Russell Griffin, Poija Bhatt, Pia Kivisakk-Webb, Robert Fuhlbrigge, Thomas Kupper, Howard Weiner, and Clare Baecher-Allan

IMMUNE SYSTEM DEVELOPMENT

2190 GATA2 Germline Mutations Impair GATA2 Transcription, Causing Haploinsufficiency: Functional Analysis of the p.Arg396Gln Mutation
Xabier Cortés-Lavaud, Manuel F. Landecho, Miren Maicas, Leire Urquiza, Juana Merino, Isabel Moreno-Miralles, and Maria D. Odero
**IMMUNOTHERAPY AND VACCINES**

2199 The Combination of ISCOMATRIX Adjuvant and TLR Agonists Induces Regression of Established Solid Tumors In Vivo
Anabel Silva, Adele Mount, Karoline Krestovska, David Pejoski, Matthew P. Hardy, Catherine Owczarek, Pierre Scotty, Eugene Maraskovsky, and Adriana Baz Morelli

2208 Oxidized Low-Density Lipoprotein–Induced Apoptotic Dendritic Cells as a Novel Therapy for Atherosclerosis
Vanessa Frodermann, Gijs H. M. van Puijvelde, Laura Wierts, H. Maxime Lagrauw, Amanda C. Foks, Peter J. van Santbrink, Ilze Bot, Johan Kuiper, and Saskia C. A. de Jager

**INFECTIOUS DISEASE AND HOST RESPONSE**

2219 Cryptococcus neoformans–Induced Macrophage Lysosome Damage Crucially Contributes to Fungal Virulence
Michael J. Davis, Alison J. Eastman, Yafeng Qiu, Brian Gregorka, Thomas R. Kozel, John J. Osterholzer, Jeffrey L. Curtis, Joel A. Swanson, and Michal A. Olszewski

2232 HLA-A02:01–Restricted Epitopes Identified from the Herpes Simplex Virus Tegument Protein VP11/12 Preferentially Recall Polyfunctional Effector Memory CD8+ T Cells from Seropositive Asymptomatic Individuals and Protect Humanized HLA-A*02:01 Transgenic Mice against Ocular Herpes
Ruchi Srivastava, Arif A. Khan, Dovan Spencer, Hauva Vaheek, Patricia P. Lopes, Nhi Thi Uyen Thai, Christine Wang, Thanh T. Pham, Jiawei Huang, Vanesa M. Scarfone, Anthony B. Nesburn, Steven L. Wechsler, and Lbachir BenMohamed

2249 Regulation of Asymmetric Division and CD8+ T Lymphocyte Fate Specification by Protein Kinase Cζ and Protein Kinase Ca/β
Patrick J. Metz, Janylyn Arsenio, Boyko Kakaradov, Stephanie H. Kim, Kelly A. Remedios, Katherine Oakley, Kazunori Akimoto, Shigeo Ohno, Gene W. Yeo, and John T. Chang

2260 Dermal-Resident versus Recruited γδ T Cell Response to Cutaneous Vaccinia Virus Infection
Amanda S. Woodward Davis, Tessa Bergsbaken, Martha A. Delaney, and Michael J. Bevan

2268 CD40 Is Required for Protective Immunity against Liver Stage Plasmodium Infection
Sara A. Murray, Isaac Mohar, Jessica L. Miller, Katherine J. Brempelis, Ashley M. Vaughan, Stefan H. I. Kappe, and Ian N. Crispe

2280 WC1 Is a Hybrid γδ TCR Coreceptor and Pattern Recognition Receptor for Pathogenic Bacteria
Haoting Hsu, Chuang Chen, Ariel Nenninger, Lauren Holz, Cynthia L. Baldwin, and Janice C. Telfer

2289 PD-1 Suppresses Protective Immunity to Streptococcus pneumoniae through a B Cell–Intrinsic Mechanism

2300 HIV-1–Triggered Release of Type I IFN by Plasmacytoid Dendritic Cells Induces BAFF Production in Monocytes
Alejandro M. Gomez, Michel Ouellet, and Michel J. Tremblay

2309 Shiga Toxin–Induced Complement-Mediated Hemolysis and Release of Complement-Coated Red Blood Cell–Derived Microvesicles in Hemolytic Uremic Syndrome
Ida Arvidson, Anne-lie Säth, Minola Manea Hedstrom, Ann-Charlotte Kristoffersson, Christian Rylander, Julia S. Westman, Jill R. Story, Martin L. Olson, and Diana Karpman

2319 Protective Immunity against Chlamydia trachomatis Can Engage Both CD4+ and CD8+ T Cells and Bridge the Respiratory and Genital Mucosae
Catarina V. Nogueira, Xiaqing Zhang, Nicholas Giovannone, Erica L. Sennott, and Michael N. Starnbach

**INNATE IMMUNITY AND INFLAMMATION**

2330 ChemR23, the Receptor for Chemerin and Resolvin E1, Is Expressed and Functional on M1 but Not on M2 Macrophages
Magdalena Herová, Mattia Schmid, Claudio Gemperle, and Martin Hersberger
Cell-Autonomous Sex Differences in Gene Expression in Chicken Bone Marrow–Derived Macrophages
Carla Garcia-Morales, Sunil Nandi, Debiao Zhao, Kristin A. Sauter, Lonneke Vervelde, Derek McBride, Helen M. Sang, Mike Clinton, and David A. Hume

Macrophage Mitochondrial and Stress Response to Ingestion of Cryptococcus neoformans
Carolina Coelho, Ana Camila Oliveira Souza, Lorena da Silveira Derengowski, Carlos de Leon-Rodriguez, Bo Wang, Rosiris Leon-Rivera, Anamelia Lorenzetti Bocca, Teresa Gonçalves, and Arturo Casadevall

A Novel Model for IFN-γ–Mediated Autoinflammatory Syndromes
R. Lee Reinhardt, Hong-Erh Liang, Katherine Bao, April E. Price, Markus Mohrs, Ben L. Kelly, and Richard M. Locksley

IFN Regulatory Factor 8 Represses GM-CSF Expression in T Cells To Affect Myeloid Cell Lineage Differentiation
Amy V. Paschall, Ruibua Zhang, Chen-Feng Qi, Kankana Bardhan, Liang Peng, Geming Lu, Jianjun Yang, Miriam Merad, Tracy McGaha, Gang Zhou, Andrew Mellor, Scott I. Abrams, Herbert C. Morse, III, Keiko Ozato, Huabao Xiong, and Kebin Liu

MOLECULAR AND STRUCTURAL IMMUNOLOGY

Constraints Contributed by Chromatin Looping Limit Recombination Targeting during Ig Class Switch Recombination
Scott Feldman, Ikbel Achour, Robert Wuerffel, Satyendra Kumar, Tatiana Gerasimova, Ranjan Sen, and Amy L. Kenter

Activation of Human γδ T Cells by Cytosolic Interactions of BTN3A1 with Soluble Phosphoantigens and the Cytoskeletal Adaptor Periplakin
David A. Rhodes, Hung-Chang Chen, Amanda J. Price, Anthony H. Keeble, Martin S. Davey, Leo C. James, Matthias Eberl, and John Trowsdale

The Endocytosis and Signaling of the γδ T Cell Coreceptor WC1 Are Regulated by a Dileucine Motif
Haoting Hsu, Cynthia L. Baldwin, and Janice C. Telfer

MUCOSAL IMMUNOLOGY

Smad4 Promotes Differentiation of Effector and Circulating Memory CD8 T Cells but Is Dispensable for Tissue-Resident Memory CD8 T Cells
Yinghong Hu, Young-Tae Lee, Susan M. Kaech, Beth Garvey, and Linda S. Cauley

Retinoic Acid Imprints a Mucosal-like Phenotype on Dendritic Cells with an Increased Ability To Fuel HIV-1 Infection
Natalia Guerra-Pérez, Ines Frank, Filippo Veglia, Meropi Aravantinou, Diana Goode, James L. Blanchard, Agegnehu Gettie, Melissa Robbiani, and Elena Martinelli

Reprogramming of Monocytes by GM-CSF Contributes to Regulatory Immune Functions during Intestinal Inflammation
Jan Däbritz, Toni Weinhage, Georg Varga, Timo Wirth, Karoline Walischek, Anne Brockhausen, David Schwarzmayer, Markus Brückner, Matthias Ross, Dominik Bettenworth, Johannes Roth, Jan M. Ehrchen, and Dirk Foell

TUMOR IMMUNOLOGY

Expression of Functional Sphingosine-1 Phosphate Receptor-1 Is Reduced by B Cell Receptor Signaling and Increased by Inhibition of PI3 Kinase δ but Not SYK or BTK in Chronic Lymphocytic Leukemia Cells
Kathleen J. Till, Andrew R. Pettitt, and Joseph R. Slupsky

CORRECTIONS

Correction: Novel Insights on Human NK Cells’ Immunological Modalities Revealed by Gene Expression Profiling
Jacob Hanna, Pamela Bechtel, Yufeng Zhai, Fadi Yousef, Karen McLachlan, and Ofer Mandelboim

AUTHOR INDEX