IN THIS ISSUE

4547  The Magic of the Medulla  See article p. 4641
TNFR2 Tips Autoimmunity  See article p. 4668
A B Cell Never Forgets  See article p. 4753
Deciphering Diabetes Susceptibility  See article p. 4841
SIV Selectively Strikes Macrophage Subsets  See article p. 4884
Kidney Residents Are Poor Tenants in Ischemia  See article p. 4973

LETTERS TO THE EDITOR

4549  Comment on “Primary Central Nervous System (CNS) Lymphoma B Cell Receptors Recognize CNS Proteins”
Elmar Spies, Michael Fichtner, Fabian Müller, Susanne Krasemann, Gerald Illerhaus, Markus Glatzel, Mascha Binder, and Martin Trepel

4550  Response to Comment on “Primary Central Nervous System (CNS) Lymphoma B Cell Receptors Recognize CNS Proteins”
Manuel Montesinos-Rongen, Frauke Purschke, Anna Brunn, and Martina Deckert

4551  Comment on “Deficient NLRP3 and AIM2 Inflammasome Function in Autoimmune NZB Mice”
Divaker Choubey and Ravichandran Panchanathan

4552  Response to Comment on “Deficient NLRP3 and AIM2 Inflammasome Function in Autoimmune NZB Mice”
David P. Sester and Katryn J. Stacey

IMMUNOLOGY NOTES AND RESOURCES

4555  CD Nomenclature 2015: Human Leukocyte Differentiation Antigen Workshops as a Driving Force in Immunology

BRIEF REVIEWS

4565 APOBEC3 Proteins in Viral Immunity
Spyridon Stavrou and Susan R. Ross

CUTTING EDGE

4573 Cutting Edge: Inhibiting TBK1 by Compound II Ameliorates Autoimmune Disease in Mice
Maroof Hasan, Nicole Dobbs, Shabeen Khan, Michael A. White, Edward K. Wakeland, Quan-Zhen Li, and Nan Yan

4578 Cutting Edge: Plasmacytoid Dendritic Cells in Late-Stage Lupus Mice Defective in Producing IFN-α
Xiaofeng Liao, Song Li, Robert E. Settlage, Sha Sun, Jingjing Ren, Alec M. Reibl, Hsueng Zhang, Saikumar V. Karyala, Christopher M. Reilly, S. Ansar Ahmed, and Xin M. Luo

ANTIGEN RECOGNITION AND RESPONSES

4583 Sensor Function for Butyrophilin 3A1 in Prenyl Pyrophosphate Stimulation of Human Vγ2Vδ2 T Cells
Hong Wang and Craig T. Morita

4595 T Cell Responses against Mycobacterial Lipids and Proteins Are Poorly Correlated in South African Adolescents

4604 Antigen Specificity of Type I NKT Cells Is Governed by TCR β-Chain Diversity
Garth Cameron, Daniel G. Pellicci, Adam P. Uldrich, Gurjatpal S. Besra, Petr Illarionov, Spencer J. Williams, Nicole L. La Gruta, Jamie Rouzjohn, and Dale I. Godfrey

4615 Mechanistic Target of Rapamycin Complex 1/S6 Kinase 1 Signals Influence T Cell Activation Independently of Ribosomal Protein S6 Phosphorylation
Robert J. Salmond, Rebecca J. Brownlie, Oded Meyuhas, and Rose Zamoyska

AUTOIMMUNITY

4623 Identification of the SLAM Adapter Molecule EAT-2 as a Lupus-Susceptibility Gene That Acts through Impaired Negative Regulation of Dendritic Cell Signaling
Nafiseh Talaei, Tao Yu, Kieran Manion, Rod Brenner, and Joan E. Wither

4632 miR-155 Upregulation in Dendritic Cells Is Sufficient To Break Tolerance In Vivo by Negatively Regulating SHIP1

4641 Ectopic Aire Expression in the Thymic Cortex Reveals Inherent Properties of Aire as a Tolerogenic Factor within the Medulla
Hitoshi Nishijima, Satoshi Kitano, Hitoshi Miyachi, Junko Morimoto, Hiroshi Kawano, Fumiko Hirota, Ryoko Morita, Yasuhiro Mouri, Kiyoshi Masuda, Issei Imoto, Koichi Ikuta, and Mitsuru Matsumoto

4650 A Lymphotoxin/Type I IFN Axis Programs CD8+ T Cells To Infiltrate a Self-Tissue and Propagate Immunopathology
Dennis Ng, Blandine Maître, Derek Cummings, Albert Lin, Lesley A. Ward, Ramtin Rahbar, Karen L. Moirnan, Pamela S. Ohashi, and Jennifer L. Gommerman

4660 A Central Role for HLA-DR3 in Anti-Smith Antibody Responses and Glomerulonephritis in a Transgenic Mouse Model of Spontaneous Lupus
Vaidhehi R. Chowdary, Chao Dai, Ashena Y. Tilahun, Julie A. Hanson, Michele K. Smart, Joseph P. Grande, Govindarajan Rajagopalan, Shu-Man Fu, and Chella S. David

4668 TNFR2 Deficiency Acts in Concert with Gut Microbiota To Precipitate Spontaneous Sex-Biased Central Nervous System Demyelinating Autoimmune Disease
Patrick G. Miller, Michael B. Bonn, Craig L. Franklin, Aaron C. Ericson, and Susan C. McKarns
Cholesterol-Independent Suppression of Lymphocyte Activation, Autoimmunity, and Glomerulonephritis by Apolipoprotein A-I in Normocholesterolemic Lupus-Prone Mice

Leland L. Black, Roshni Srivastava, Trenton R. Schoeb, Ray D. Moore, Stephen Barnes, and Janusz H. Kabarowski

CLINICAL AND HUMAN IMMUNOLOGY

Low Thymic Activity and Dendritic Cell Numbers Are Associated with the Immune Response to Primary Viral Infection in Elderly Humans

Axel Ronald Schulz, Julia Nora Mätzler, Cristina Domingo, Karsten Jürchott, Andreas Grützkau, Nina Babel, Mikalai Nienen, Tomas Jelinek, Matthias Niedrig, and Andreas Thiel

NK Cell Functional Impairment after Allogeneic Hematopoietic Stem Cell Transplantation Is Associated with Reduced Levels of T-bet and Eomesodermin

Federico Simonetta, Amadine Padrer, Carine Boshard, Stavroula Masouridi-Levrat, Yves Chalandon, and Eddy Roosen

IMMUNE REGULATION

Authentic GITR Signaling Fails To Induce Tumor Regression unless Foxp3+ Regulatory T Cells Are Depleted


Targeting Anti-Insulin B Cell Receptors Improves Receptor Editing in Type 1 Diabetes–Prone Mice

Rachel H. Bonami and James W. Thomas

Eomesodermin Expression in CD4+ T Cells Restricts Peripheral Foxp3 Induction

Ekaterina Lupar, Maria Brack, Laure Garnier, Sophie Laffont, Katharina S. Rauch, Kristina Schachtrup, Sebastian J. Arnold, Jean-Charles Guéry, and Ana Izzue

Cellular Dynamics of Memory B Cell Populations: IgM+ and IgG+ Memory B Cells Persist Indefinitely as Quiescent Cells

Derek D. Jones, Joel R. Wilmore, and David Allman

UNC-45A Is a Nonmuscle Myosin IIA Chaperone Required for NK Cell Cytotoxicity via Control of Lytic Granule Secretion

Yoshiie Iizuka, Frank Cichocki, Andrew Sieben, Fabio Sforza, Razaaul Karim, Kathleen Coughlin, Rachel Isakson Vogel, Riccardo Gavioli, Valarie McCullar, Todd Lenvik, Michael Lee, Jeffrey Miller, and Martina Bazzaro

IL-25 or IL-17E Protects against High-Fat Diet–Induced Hepatic Steatosis in Mice Dependent upon IL-13 Activation of STAT6

An-Jiang Wang, Zhonghan Yang, Viktortiya Grinchuk, Allen Smith, Bolin Qin, Nonghua Lu, Duan Wang, Hongbing Wang, Thirumalai R. Ramalingam, Thomas A. Wynn, Joseph F. Urban, Jr., Terez Shea-Donohue, and Aiping Zhao

Phenotypic and Morphological Properties of Germinal Center Dark Zone Cxcl12-Expressing Reticular Cells

Lauren B. Rodda, Oliver Bannard, Burkhard Ludewig, Takashi Nagasawa, and Jason G. Cyster

The Quantity of Autocrine IL-2 Governs the Expansion Potential of CD8+ T Cells

Anke Redeker, Suzanne P. M. Welten, Miranda R. M. Baert, Sandra A. Vloemans, Machteld M. Tiemessen, Frank J. T. Saal, and Ramon Arens

Endoplasmic Reticulum Stress of Neutrophils Is Required for Ischemia/Reperfusion–Induced Acute Lung Injury

Rong Hu, Zhi-Feng Chen, Jia Yan, Qi-Fang Li, Yan Huang, Hui Xu, Xiao-Ping Zhang, and Hong Jiang

NK Cell Proliferation Induced by IL-15 Transpresentation Is Negatively Regulated by Inhibitory Receptors

Olga M. Anton, Susina Vielkind, Mary E. Peterson, Yutaka Tagaya, and Eric O. Long

A Small Molecule Inhibitor of ITK and RLK Impairs Th1 Differentiation and Prevents Colitis Disease Progression

Hyung-Soo Cho, Hyun Mu Shin, Helena Haberstock-Debic, Yan Xing, Timothy D. Owens, Jens Oliver Funk, Ronald J. Hill, J. Michael Bradshaw, and Leslie J. Berg
IMMUNE SYSTEM DEVELOPMENT
4832 Responsiveness of Developing T Cells to IL-7 Signals Is Sustained by miR-17
Malte Regelin, Jonas Blume, Jens Pommerenke, Ramin Vakilzadeh, Karolin Wittelau, Marcin Lyszkiwicz, Natalia Ziętara, Namita Saran, Axel Schambach, and Andreas Krueger

IMMUNOGENETICS
4841 Ptpn22 and Cd2 Variations Are Associated with Altered Protein Expression and Susceptibility to Type 1 Diabetes in Nonobese Diabetic Mice
Heather I. Fraser, Sarah Howlett, Jan Clark, Daniel B. Rainbow, Stephanie M. Stanford, Dennis J. Wu, Yi-Wen Hsieh, Christian J. Maine, Mikkel Christensen, Vijay Kuchroo, Linda A. Sherman, Patricia L. Podolin, John A. Todd, Charles A. Stewart, Laurence B. Peterson, Nunzio Bottini, and Linda S. Wicher

IMMUNOTHERAPY AND VACCINES
4853 Bee Venom Phospholipase A2, a Novel Foxp3+ Regulatory T Cell Inducer, Protects Dopaminergic Neurons by Modulating Neuroinflammatory Responses in a Mouse Model of Parkinson’s Disease
Eun Sook Chung, Gihyun Lee, Chanju Lee, Minsook Ye, Hwan-suck Chung, Hyunseong Kim, Sung-jo S. Bae, Deok-Sang Hwang, and Hyunsu Bae

4861 Enhancing the Quality of Antibodies to HIV-1 Envelope by GagPol-Specific Th Cells
Michael Storcksdieck genannt Bonsmann, Thomas Nieszold, Vladimir Tencmchura, Franco Pisani, Karolin Ehrhardt, Eric P. Brown, Nana Yaw Osei-Owuus, Drew Hannaman, Hartmut Hengel, Margaret E. Ackerman, Hendrik Streeck, Gholam Nabi, Matthias Tenbusch, and Klaus Überla

INFECTION DISEASE AND HOST RESPONSE
4873 Polarization of Monocytic Myeloid-Derived Suppressor Cells by Hepatitis B Surface Antigen Is Mediated via ERK/IL-6/STAT3 Signaling Feedback and Restrains the Activation of T Cells in Chronic Hepatitis B Virus Infection
Zhong Fang, Jin Li, Xiaoyu Yu, Dandan Zhang, Guangcu Ren, Bisheng Shi, Cong Wang, Anna D. Kosinska, Sen Wang, Xiaohui Zhou, Maya Kozlowski, Yunwen Hu, and Zhonghong Yuan

4884 Preferential Destruction of Interstitial Macrophages over Alveolar Macrophages as a Cause of Pulmonary Disease in Simian Immunodeficiency Virus–Infected Rhesus Macaques
Yanhui Cai, Chie Sugimoto, Mariluz Arainga, Cecily C. Midkiff, David Xinbong Liu, Xavier Alvarez, Andrew A. Lackner, Woong-Ki Kim, Elizabeth S. Didier, and Marcelo J. Kuroda

4892 Limited Internodal Migration of T Follicular Helper Cells after Peripheral Infection with Herpes Simplex Virus-1
Sanda Stankovic, Christopher M. Harpur, Bethany L. MacLeod, Paul G. Whitney, Thomas Gebhardt, and Andrew G. Brooks

INNATE IMMUNITY AND INFLAMMATION
4900 Sos1 Regulates Macrophage Podosome Assembly and Macrophage Invasive Capacity
Anna Baruzzi, Sabrina Remelli, Erika Lorenzetto, Michela Sega, Roberto Chignola, and Giorgio Berton

4913 SARM1, Not MyD88, Mediates TLR7/TLR9-Induced Apoptosis in Neurons
Piyali Mukherjee, Clayton W. Winkler, Katherine G. Taylor, Tyson A. Woods, Vinod Nair, Burhan A. Khan, and Karin E. Peterson

4922 Novel Role of TRPML2 in the Regulation of the Innate Immune Response
Lu Sun, Yinan Hua, Silvia Vergarajawagui, Heba I. Diab, and Rosa Puertollano

4933 LRRC59 Regulates Trafficking of Nucleic Acid–Sensing TLRs from the Endoplasmic Reticulum via Association with UNC93B1
Megumi Tatematsu, Kenji Funami, Noviko Ishii, Tsukasa Seya, Chikabi Obuse, and Miako Matsumoto

4943 Cytosolic Low Molecular Weight FGF2 Orchestrates RIG-I–Mediated Innate Immune Response
Xin Liu, Deyan Luo, and Ning Yang
Dynamics and Transcriptomics of Skin Dendritic Cells and Macrophages in an Imiquimod-Induced, Biphasic Mouse Model of Psoriasis
Dorothea Terhorst, Rabie Chelbi, Christian Wohn, Camille Malosse, Samira Tamoutounour, Audrey Jorquera, Marc Bajenoff, Marc Dalod, Bernard Malissen, and Sandrine Henri

Internalized Cryptococcus neoformans Activates the Canonical Caspase-1 and the Noncanonical Caspase-8 Inflammasomes
Mingkuan Chen, Yue Xing, Anling Lu, Wei Fang, Bing Sun, Changbin Chen, Wanqing Liao, and Guangxun Meng

Tissue-Resident NK Cells Mediate Ischemic Kidney Injury and Are Not Depleted by Anti–Asialo-GM1 Antibody

MOLECULAR AND STRUCTURAL IMMUNOLOGY
Complement Evasion Mediated by Enhancement of Captured Factor H: Implications for Protection of Self-Surfaces from Complement
Andrew P. Herbert, Elisavet Makou, Zhuo A. Chen, Heather Kerr, Anna Richards, Juri Rappisiler, and Paul N. Barlow

MUCOSAL IMMUNOLOGY
Lipopolysaccharide Regulation of Intestinal Tight Junction Permeability Is Mediated by TLR4 Signal Transduction Pathway Activation of FAK and MyD88
Shuhong Guo, Meghali Nighot, Rana Al-Sadi, Tarik Alhmoud, Prashant Nighot, and Thomas Y. Ma

Intestinal Epithelial Cell Tyrosine Kinase 2 Transduces IL-22 Signals To Protect from Acute Colitis
Eva Hainzl, Silvia Stockinger, Isabella Rauch, Susanne Heider, David Berry, Caroline Lessing, Clarisa Schwab, Felix Rosebrock, Gabriel Milanovich, Michaela Schlederer, Michael Wagner, Christa Schleper, Alexander Loy, Tim Urich, Lukas Kenner, Xiaonan Han, Thomas Decker, Birgit Strobl, and Mathias Müller

Oral Immunization with a Recombinant Lactococcus lactis–Expressing HIV-1 Antigen on Group A Streptococcus Pilus Induces Strong Mucosal Immunity in the Gut
Venkateswarlu Chamcha, Andrew Jones, Bernard R. Quigley, June R. Scott, and Rama Rao Amara

TRANSPLANTATION
Regulatory B Cells with a Partial Defect in CD40 Signaling and Overexpressing Granzyme B Transfer Allograft Tolerance in Rodents
Justine Durand, Virginie Huchet, Emmanuel Meireau, Claire Usal, Melanie Chesneau, Severine Remy, Michele Helen, Ignacio Anegon, Maria-Cristina Caturi, Sophie Brouard, and Elise Chiffioleau

Housing Temperature–Induced Stress Is Suppressing Murine Graft-versus-Host Disease through β2-Adrenergic Receptor Signaling

TUMOR IMMUNOLOGY
Dectin-1 Activation by a Natural Product β-Glucan Converts Immunosuppressive Macrophages into an M1-like Phenotype
Min Liu, Fengling Luo, Chuanlin Ding, Sabrin Albeituni, Xiaoling Hu, Yunfeng Ma, Yihua Cai, Lacey McNally, Mary Ann Sanders, Dharamveer Jain, Goetz Kloecker, Michael Bousamra, II, Huang-ge Zhang, Richard M. Higashi, Andrew N. Lane, Teresa W.-M. Fan, and Jun Yan

Oncogenic Transformation of Dendritic Cells and Their Precursors Leads to Rapid Cancer Development in Mice
Jan P. Böttcher, Santiago Zelenay, Neil C. Rogers, Julie Helft, Barbara U. Schraml, and Caetano Reis e Sousa
A Complement-Optimized EGFR Antibody Improves Cytotoxic Functions of Polymorphonuclear Cells against Tumor Cells

Stefanie Derer, Michael Cossham, Thies Römer, Christian Kellner, Frank J. Beurskens, Ralf Schwanbeck, Stefan Lohse, Christian Sina, Matthias Peipp, and Thomas Valerius

AUTHOR INDEX