This information is current as of April 13, 2017.
IN THIS ISSUE

1  Shedding Stemness with Lupus Locus See article p. 43
   Turn Down Those TLRs See article p. 101
   β-catenin Alters DC Decisions See article p. 210
   Doubts about DTR in DCs See article p. 307
   In-speck-ting Inflammasomes by Flow See article p. 455

PILLARS OF IMMUNOLOGY

3  Not Second Class: The First Class II MHC Crystal Structure
   Pamela J. Bjorkman

5  Pillars Article: Three-Dimensional Structure of the Human Class II Histocompatibility Antigen HLA-DR1.

BRIEF REVIEWS

13  Natural Antibodies Bridge Innate and Adaptive Immunity
    Saswati Panda and Jeak L. Ding

21  Mechanisms of Jak/STAT Signaling in Immunity and Disease
    Alejandro V. Villarino, Yuka Kanno, John R. Ferdinand, and John J. O'Shea

CUTTING EDGE

29  Cutting Edge: GPR35/CXCR8 Is the Receptor of the Mucosal Chemokine CXCL17
    José L. Maravillas-Montero, Amanda M. Burkhardt, Peter A. Hevezi, Christina D. Carnevale, Martine J. Smit, and Albert Zlotnik

ANTIGEN RECOGNITION AND RESPONSES

35 ATAD5 Deficiency Decreases B Cell Division and Igh Recombination
Kimberly J. Zanotti, Robert W. Maul, Diana P. Castiblanco, William Yang, Yong Jun Choi, Jennifer T. Fox, Kyungjae Myung, Huseyin Saribasak, and Patricia J. Gearhart

AUTOIMMUNITY

43 The Murine Pbx1-d Lupus Susceptibility Allele Accelerates Mesenchymal Stem Cell Differentiation and Impairs Their Immunosuppressive Function
Shun Lu, Leilani Zeumer, Heather Sorensen, Hong Yang, Yunfai Ng, Fahong Yu, Alberto Rita, Byron Croker, Shannon Wallet, and Lawrence Morel

56 A Crucial Role of RORγt in the Development of Spontaneous Sialadenitis-like Sjögren’s Syndrome
Mana Iizuka, Hiroto Tsuboi, Naomi Matsuo, Hiromitsu Aishiama, Tomoyo Hirota, Yuya Kondo, Yoichiro Iwashara, Satoru Takashashi, Isao Matsumoto, and Takayuki Sumida

68 Th1/Th17 Plasticity Is a Marker of Advanced β Cell Autoimmunity and Impaired Glucose Tolerance in Humans

76 Systemic Lentivirus-Mediated Delivery of Short Hairpin RNA Targeting Calcium Release–Activated Calcium Channel 3 as Gene Therapy for Collagen-Induced Arthritis
Shuang Liu, Takeshi Kiyoi, Erika Takenasai, and Kazutaka Maizama

84 In Vivo Maintenance of Human Regulatory T Cells during CD25 Blockade
David J. Hus, Devangi S. Mehta, Akanksha Sharma, Xiaojun You, Katherine A. Riester, James P. Sheridan, Lakshmi S. Amaravadi, Jacob S. Elkin, and Jason D. Fontenot

CLINICAL AND HUMAN IMMUNOLOGY

93 Helminth Infection Alters IgE Responses to Allergens Structurally Related to Parasite Proteins
Helton da Costa Santiago, Flavia L. Ribeiro-Gomes, Saiseskar Bennuru, and Thomas B. Nutman

101 Inhibition of Type 4 Cyclic Nucleotide Phosphodiesterase Blocks Intracellular TLR Signaling in Chronic Lymphocytic Leukemia and Normal Hematopoietic Cells
Ying Tan, Amanda A. Watkins, Benjamin B. Freeman, John A. Meyers, Ian R. Rifkin, and Adam Lerner

113 Ex Vivo–Expanded but Not In Vitro–Induced Human Regulatory T Cells Are Candidates for Cell Therapy in Autoimmune Diseases Thanks to Stable Demethylation of the FOXP3 Regulatory T Cell–Specific Demethylated Region
Maura Rossetti, Roberto Spreafico, Suzan Saidin, Camillus Chua, Maryam Mobiref, Jing Yao Leong, York Kiat Tan, Julian Thumboo, Jorg van Loosdregt, and Salvatore Albani

IMMUNE REGULATION

125 OX40- and CD27-Mediated Costimulation Synergizes with Anti–PD-L1 Blockade by Forcing Exhausted CD8+ T Cells To Exit Quiescence
Sarah L. Buchan, Tereza Manzo, Barry Flutter, Anne Rogel, Noha Edwards, Lei Zhang, Shivajanani Sivakumaran, Sara Ghorashian, Ben Carpenter, Clare L. Bennett, Gordon J. Freeman, Megan Sykes, Michael Croft, Aymen Al-Shamkhani, and Ronjon Chakraverty

134 4-1BB Ligand Signaling to T Cells Limits T Cell Activation
So-Young Eun, Seung-Woo Lee, Yanfei Xu, and Michael Croft

142 A Brief Exposure to Tryptase or Thrombin Potentiates Fibrocyte Differentiation in the Presence of Serum or Serum Amyloid P
Michael J. V. White, Elkin Galvis-Carvajal, and Richard H. Gomer

151 Sialylation of N-Linked Glycans Influences the Immunomodulatory Effects of IgM on T Cells
Manuela Colucci, Henning Stöckmann, Alesisa Butera, Andrea Masotti, Antonella Baldassarre, Ezio Giorda, Stefania Petrini, Pauline M. Rudd, Roberto Sittia, Francesco Emma, and Marina Vivarelli
A Critical Role for the Regulated Wnt–Myc Pathway in Naive T Cell Survival
Chunshu Wong, Chong Chen, Qi Wu, Yang Liu, and Pan Zheng

Specific Calcineurin Isoforms Are Involved in Drosophila Toll Immune Signaling
Yi-Xian Li and Pascale F. Dijkers

JUNB Is a Key Transcriptional Modulator of Macrophage Activation
Mary F. Fontana, Alysa Baccarella, Nidhi Pancholi, Miles A. Pufall, De’Broski R. Herbert, and Charles C. Kim

Carp Il10 Has Anti-Inflammatory Activities on Phagocytes, Promotes Proliferation of Memory T Cells, and Regulates B Cell Differentiation and Antibody Secretion
M. Carla Piazzon, Huub F. J. Savelkoul, Danilo Pietretti, Geert F. Wiegertjes, and Maria Forlenza

IMMUNE SYSTEM DEVELOPMENT

Rpl22 Loss Impairs the Development of B Lymphocytes by Activating a p53-Dependent Checkpoint
Shawn P. Fahl, Bryan Harris, Francis Coffey, and David L. Wiest

β-Catenin Signaling Drives Differentiation and Proinflammatory Function of IRF8-Dependent Dendritic Cells
Sara B. Cohen, Norah L. Smith, Courtney McDougall, Marion Pepper, Subagi Shah, George S. Yap, Hans Acha-Orbea, Aimin Jiang, Björn E. Clausen, Brian D. Rudd, and Eric Y. Denkers

Mammalian Target of Rapamycin Complex 2 Regulates Invariant NKT Cell Development and Function Independent of Promyelocytic Leukemia Zinc-Finger
Nicolas Prevost, Kyunji Pyaram, Evan Bischoff, Jyoti Misra Sen, Jonathan D. Powell, and Cheong-Hee Chang

Natural IgM Is Produced by CD5- Plasma Cells That Occupy a Distinct Survival Niche in Bone Marrow
Alexander E. Reynolds, Masayuki Kuraoka, and Garnett Kelsoe

A Genome-Wide Analysis Identifies a Notch–RBP-Jκ–IL-7Rα Axis That Controls IL-17–Producing γδ T Cell Homeostasis in Mice
Masatake Nakamura, Kensuke Shibata, Shinya Hatano, Tetsuya Sato, Yasuyuki Ohkawa, Hisakata Yamada, Koichi Ikuta, and Yasunobu Yoshikai

IMMUNOGENETICS

Identification of Antigen-Specific B Cell Receptor Sequences Using Public Repertoire Analysis
Johannes Trück, Maheshi N. Ramasamy, Jacob D. Galion, Richard Rance, Julian Parkhill, Gerton Lunter, Andrew J. Pollard, and Dominic F. Kelly

A CD46-like Molecule Functional in Teleost Fish Represents an Ancestral Form of Membrane-Bound Regulators of Complement Activation
Masakazu Tsujikura, Takahiro Nagasawa, Satoko Ichiki, Ryota Nakamura, Tomonori Somamoto, and Miki Nakao

INFECTIOUS DISEASE AND HOST RESPONSE

IL-2/Anti–IL-2 Antibody Complex Treatment Inhibits the Development but Not the Progression of Herpetic Stromal Keratitis
Subhash Gaddipati, Kajbleen Estrada, Pushpa Rao, Andrew David Jerome, and Sumit Suvas

Eosinophils Mediate Protective Immunity against Secondary Nematode Infection
Lu Huang, Nebiat G. Gebreselasie, Lucille F. Gagliardo, Maura C. Ruyechan, Kirsten L. Luber, Nancy A. Lee, James J. Lee, and Judith A. Appleton

Dysregulated miR-34a–SIRT1–Acetyl p65 Axis Is a Potential Mediator of Immune Activation in the Colon during Chronic Simian Immunodeficiency Virus Infection of Rhesus Macaques
Mahesh Mohan, Vinay Kumar, Andrew A. Lackner, and Xavier Alvarez
INNATE IMMUNITY AND INFLAMMATION

307 Altered Lymph Node Composition in Diphtheria Toxin Receptor–Based Mouse Models To Ablate Dendritic Cells
Janneke van Blijswijk, Barbara U. Schraml, Neil C. Rogers, Paul G. Whitney, Santiago Zelenay, Sophie E. Acton, and Caetano Reis e Sousa

316 Crosstalk among IL-23 and DNAX Activating Protein of 12 kDa–Dependent Pathways Promotes Osteoclastogenesis
Hyun-Seock Shin, Ritu Sarin, Neha Dixit, Jian Wu, Eric Gershwin, Edward P. Bowman, and Iannis E. Adamopoulos

325 Both PD-1 Ligands Protect the Kidney from Ischemia Reperfusion Injury
Katarzyna Jaworska, Joanna Ratajczak, Liping Huang, Kristen Whalen, Manu Yang, Brian K. Stevens, and Gilbert R. Kinsey

334 Myeloid Cell TRAF3 Regulates Immune Responses and Inhibits Inflammation and Tumor Development in Mice
Almin I. Lalani, Carissa R. Moore, Chang Luo, Benjamin Z. Kreider, Yan Liu, Herbert C. Morse, III, and Ping Xie

349 Blau Syndrome–Associated Nod2 Mutation Alters Expression of Full-Length NOD2 and Limits Responses to Muramyl Dipeptide in Knock-in Mice
Jae Dugan, Eric Griffiths, Paige Snow, Holly Rosenzweig, Ellen Lee, Brieanna Brown, Daniel W. Carr, Carlos Rose, James Rosenbaum, and Michael P. Davey

358 Lyme Borreliosis and Deficient Mannose-Binding Lectin Pathway of Complement
Eeva M. Sajantti, Kirsi Gröndahl-Yli-Hannukela, Tommi Kauko, Qiuhui He, and Jukka Hyytönen

MUCOSAL IMMUNOLOGY

364 Splenic B Cells from Hymenolepis diminuta–Infected Mice Ameliorate Colitis Independent of T Cells and via Cooperation with Macrophages
José L. Reyes, Arthur Wang, Maria R. Fernando, Rabia Graepel, Gabriella Leung, Nico van Rooijen, Mikael Sigvardsson, and Derek M. McKay

379 Cornea-Infiltrating and Lymph Node Dendritic Cells Contribute to CD4+ T Cell Expansion after Herpes Simplex Virus-1 Ocular Infection
Kristine-Ann G. Buela and Robert L. Hendricks

TRANSPLANTATION

388 T-bet Is Critical for the Development of Acute Graft-versus-Host Disease through Controlling T Cell Differentiation and Function
Jianing Fu, Dapeng Wang, Yu Yu, Jessica Heinricho, Yongxia Wu, Steven Schutt, Kane Kaosaard, Chen Liu, Kelley Haarberg, David Bastian, Daniel G. McDonald, Claudio Anasetti, and Xue-Zhong Yu

398 Loss of Lymph Node Fibroblastic Reticular Cells and High Endothelial Cells Is Associated with Humoral Immunodeficiency in Mouse Graft-versus-Host Disease
Fumiko Suenaga, Satoko Ueha, Jun Abe, Mizuha Kosugi-Kanaya, Yong Wang, Akihiro Yokoyama, Yusuke Shono, Francis H. W. Shand, Yasuyuki Morishita, Jun Kuniawa, Shintaro Sato, Hiroshi Kiyono, and Kenji Matsuhashi

407 MHC-Mismatched Mixed Chimerism Mediates Thymic Deletion of Cross-Reactive Autoreactive T Cells and Prevents Insulitis in Nonobese Diabetic Mice
Jeremy J. Racine, Mingfeng Zhang, Miao Wang, William Morales, Christine Shen, and Defu Zeng

TUMOR IMMUNOLOGY

418 Granzyme B–Activated p53 Interacts with Bcl-2 To Promote Cytotoxic Lymphocyte–Mediated Apoptosis
Thouraya Ben Safia, Linda Ziani, Loetitia Favre, Lucille Lamendour, Gwendoline Gros, Fatiba Mami-Chouaib, Denis Martinvalet, Salem Chouaib, and Jerome Thiery

429 Extravascular Red Blood Cells and Hemoglobin Promote Tumor Growth and Therapeutic Resistance as Endogenous Danger Signals
Tao Yin, Sisi He, Xiaolong Liu, Wei Jiang, Tinghong Ye, Ziqiang Lin, Yaxiong Sang, Chao Su, Yang Wan, Guobo Shen, Xueli Ma, Min Yu, Fuchun Guo, Yanyang Liu, Ling Li, Qiancheng Hu, Yongsheng Wang, and Yuquan Wei
Tumoral Expression of IL-33 Inhibits Tumor Growth and Modifies the Tumor Microenvironment through CD8+ T and NK Cells

Xin Gao, Xuefeng Wang, Qianting Yang, Xin Zhao, Wen Wen, Gang Li, Junfeng Lu, Wenxin Qin, Yuan Qi, Fang Xie, Jingting Jiang, Changping Wu, Xueguang Zhang, Xinchun Chen, Heth Turnquist, Yibei Zhu, and Binfeng Lu

TCRklass: A New K-String–Based Algorithm for Human and Mouse TCR Repertoire Characterization

Xi Yang, Di Liu, Na Lv, Fangqing Zhao, Fei Liu, Jing Zou, Yan Chen, Xue Xiao, Jun Wu, Peipei Liu, Jing Gao, Yongfei Hu, Yi Shi, Jun Liu, Ruiwen Zhang, Chen Chen, Juncai Ma, George F. Gao, and Baoli Zhu

A Novel Flow Cytometric Method To Assess Inflammasome Formation


Antibody Stabilization of Peptide–MHC Multimers Reveals Functional T Cells Bearing Extremely Low-Affinity TCRs

Katie Tungatt, Valentina Bianchi, Michael D. Crowther, Wendy E. Powell, Andrea J. Schauenburg, Andrew Trimby, Marco Donia, John J. Miles, Christopher J. Holland, David K. Cole, Andrew J. Godkin, Mark Peakman, Per Thor Straten, Inge Marie Svan, Andrew K. Sewell, and Garry Dolton

AUTHOR INDEX

INFORMATION FOR AUTHORS