This information is current as of April 11, 2017.
### IN THIS ISSUE

#### LETTERS TO THE EDITOR

6859  Comment on “TLR9-Dependent Activation of Dendritic Cells by DNA from *Leishmania major* Favors Th1 Cell Development and the Resolution of Lesions”

Christian Bogdan and Ulrike Schleicher

6859  Response to Comment on “TLR9-Dependent Activation of Dendritic Cells by DNA from *Leishmania major* Favors Th1 Cell Development and the Resolution of Lesions”

Noé Doyen

#### PILLARS OF IMMUNOLOGY

6861  A Crucial Door to the Mast Cell Mystery Knocked In

Toshiaki Kawakami

6863  Pillars Article: Fate of Bone Marrow-Derived Cultured Mast Cells After Intracutaneous, Intraperitoneal, and Intravenous Transfer into Genetically Mast Cell-Deficient *W/Wv* Mice. Evidence that Cultured Mast Cells Can Give Rise to Both Connective Tissue Type and Mucosal Mast Cells.


Toru Nakano, Takashi Sonoda, Chieko Hayashi, Atsushi Yamatodani, Yoshio Kanayama, Teiichi Yamamura, Hidekazu Asai, Takeshi Yonezawa, Yukihiko Kitamura, and Stephen J. Galli

#### BRIEF REVIEWS

6883  What Role Does the Route of Immunization Play in the Generation of Protective Immunity against Mucosal Pathogens?

Igor M. Belyakov and Jeffrey D. Ahlers

#### CUTTING EDGE

6893  Cutting Edge: Requirement of MARCH-I-Mediated MHC II Ubiquitination for the Maintenance of Conventional Dendritic Cells


---


Cutting Edge: Memory CD8 T Cell Compartment Grows in Size with Immunological Experience but Nevertheless Can Lose Function
Katharina M. Huster, Christian Stemberger, Georg Gasteiger, Wolfgang Kastenmüller, Ingo Dreder, and Dirk H. Busch

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

Peroxisome Proliferator-Activated Receptor γ Ligands Enhance Human B Cell Antibody Production and Differentiation

Impaired NK Cytolytic Activity and Enhanced Tumor Growth in NK Lytic-Associated Molecule-Deficient Mice
Richard G. Hoover, Gail Gallickson, and Jacki Kornbluth

NOD2 Ligation Subverts IFN-α Production by Liver Plasmacytoid Dendritic Cells and Inhibits Their T Cell Allostimulatory Activity via B7-H1 Up-Regulation
Antonino Castellaneta, Tina L. Sumpter, Lieping Chen, Daisuke Tokita, and Angus W. Thomson

Intranasal Immunization Promotes Th17 Immune Responses
Beata M. Zygmunt, Faiza Rharbaoui, Lothar Groebe, and Carlos A. Guzman

Chimeric NKG2D Expressing T Cells Eliminate Immunosuppression and Activate Immunity within the Ovarian Tumor Microenvironment
Amorette Barber, Agnieszka Rynda, and Charles L. Sentman

RREB-1 Is a Transcriptional Repressor of HLA-G
Sébastien Flajollet, Isabelle Poras, Edgardo D. Carosella, and Philippe Moreau

TLR2 Promotes Th2/Th17 Responses via TLR4 and TLR7/8 by Abrogating the Type I IFN Amplification Loop

Innate Immune CD11b+Gr-1+ Cells, Suppressor Cells, Affect the Immune Response during Theiler’s Virus-Induced Demyelinating Disease
Jenna L. Bowen and Julie K. Olson

Prostacyclin Inhibits IFN-γ-Stimulated Cytokine Expression by Reduced Recruitment of CBP/p300 to STAT1 in a SOCS-1-Independent Manner
Derek Straussheim, Suzette R. Riddle, Danielle L. Burke, Mark W. Geraci, and Kurt R. Stenmark

Role of Double-Stranded RNA Pattern Recognition Receptors in Rhinovirus-Induced Airway Epithelial Cell Responses
Qiong Wang, Deepti R. Nagarkar, Emily R. Bowman, Dina Schneider, Babina Gouang, Jing Lei, Ying Zhao, Christina L. McHenry, Richav I. Burgens, David J. Miller, Umadevi Sajjan, and Marc B. Hershenson

Estrogen Regulates Transcription Factors STAT-1 and NF-κB to Promote Inducible Nitric Oxide Synthase and Inflammatory Responses
Rujuan Dai, Rebecca A. Phillips, Ebru Karpuzoglu, Deena Khan, and S. Ansar Ahmed

IL-9 Regulates Pathology during Primary and Memory Responses to Respiratory Syncytial Virus Infection
Jonathan S. Dodd, Edu Lum, John Goulding, Roobell Muir, Jacques Van Snick, and Peter J. M. Openshaw

Limited Role of CD4+Foxp3+ Regulatory T Cells in the Control of Experimental Cerebral Malaria
Christiane Steeg, Guido Adler, Tim Sparwasser, Bernhard Fleischer, and Thomas Jacobs

Systemic Increase in the Ratio between Foxp3+ and IL-17-Producing CD4+ T Cells in Healthy Pregnancy but Not in Preeclampsia
Brigitte Santner-Nanan, Michael John Peak, Roma Khanam, Luis Richarts, Erhua Zhu, Barbara Fazekas de St Groth, and Ralph Nanan
Female and Male Sex Hormones Differentially Regulate Expression of *Ifi202*, an Interferon-Inducible Lupus Susceptibility Gene within the *Nba2* Interval

Ravichandran Panchanathan, Hui Shen, Melanie Gubbels Bupp, Karen A. Gould, and Divaker Choubey

Absence of the Transcriptional Repressor Blimp-1 in Hematopoietic Lineages Reveals Its Role in Dendritic Cell Homeostatic Development and Function

Yueh-Hsuan Chan, Ming-Feng Chiang, Yueh-Chiao Tsai, Shin-Tang Su, Ming-Hsu Chen, Matu-Sheng Hou, and Kuo-I Lin

SOCS3 in T and NKT Cells Negatively Regulates Cytokine Production and Ameliorates ConA-Induced Hepatitis

Mako Nakaya, Masayuki Hashimoto, Ryusuke Nakagawa, Yu Wakabayashi, Takuma Ishizaki, Ichiro Takada, Kyoko Komai, Hiroki Yoshida, and Akihiko Yoshimura

Dendritic Cells Secrete the Immunosuppressive HLA-G Molecule upon CTLA4-Ig Treatment: Implication in Human Renal Transplant Acceptance

Rajia Bahri, Abderrachim Najj, Catherine Menier, Bernard Charpentier, Edgardo D. Carosella, Nathalie Rouas-Freis, and Antoine Durrbach

Interplay between Chromatin Remodeling and Epigenetic Changes during Lineage-Specific Commitment to Granzyme B Expression

Torsten Juelich, Eliisa Sutcliffe, Alice Denton, Yiqing He, Peter C. Doherty, Christopher Parish, Steven J. Turner, David Tremethick, and Sudha Rao

 Mast Cell Differentiation and Activation Is Closely Linked to Expression of Genes Coding for the Serglycin Proteoglycan Core Protein and a Distinct Set of Chondroitin Sulfate and Heparin Sulfotransferases

Annette Duelli, Elin Rönberg, Ida Waern, Maria Ringsvall, Svein O. Kolset, and Gunnar Pejler

Sex Steroid Ablation Enhances Hematopoietic Recovery following Cytotoxic Antineoplastic Therapy in Aged Mice

Jarrod A. Dudakov, Gabrielle L. Goldberg, Jessica J. Reieger, Katerina Vlabos, Ann P. Chidgey, and Richard L. Boyd

Dendritic Cells Matured by Inflammation Induce CD86-Dependent Priming of Naive CD8+ T Cells in the Absence of Their Cognate Peptide Antigen

Asher Maroof, Lynette Beatty, Alan Kirby, Mark Coles, and Paul M. Kaye

Apoptotic Dendritic Cells Induce Tolerance in Mice through Suppression of Dendritic Cell Maturation and Induction of Antigen-Specific Regulatory T Cells

Rahul Kushwah, Jordan R. Oliver, Jinzi Zhang, Katherine A. Siminovitch, and Jim Hu

Deciphering the Immune Function and Regulation by a TLR of the Cytokine EMAPII in the Lesioned Central Nervous System Using a Leech Model

David Schikorski, Virginie Cuvillier-Hot, Céline Boidin-Wichlacz, Christian Slomianny, Michel Salzet, and Aurélie Tasiemski

Dominant Expression of the Inhibitory FcyRIIB Prevents Antigen Presentation by Murine Plasmacytoid Dendritic Cells

Marcella Flores, Dharmesh D. Desai, Matthew Downie, Bitao Liang, Michael P. Reilly, Steven E. McKenzie, and Raphael Clynes

Plasmacytoid Dendritic Cells Regulate Autoreactive B Cell Activation via Soluble Factors and in a Cell-to-Cell Contact Manner

Chuanlin Ding, Yihua Cai, Jose Marroquin, Suzanne T. Ildstad, and Jun Yan

Neonatal Innate TLR-Mediated Responses Are Distinct from Those of Adults

Tobias R. Kollmann, Juliet Crabtree, Annie Rein-Weston, Darren Blomkne, Francis Themnai, Xiu Yu Wang, Pascal M. Lavoie, Jeff Furlong, Edgardo S. Fortuno III, Adeline M. Hajjar, Natalie R. Hawkins, Steven G. Self, and Christopher B. Wilson

Tc17 CD8 T Cells: Functional Plasticity and Subset Diversity

Hung-Rong Yen, Timothy J. Harris, Satoshi Wada, Joseph F. Grosso, Derese Getnet, Monica V. Goldberg, Kai-Li Liang, Tuilia C. Bruno, Kristin J. Pyle, Siaw-Li Chan, Robert A. Anders, Cornelia L. Trimble, Adam J. Adler, Tzou-Vien Lin, Drew M. Pardoll, Ching-Tai Huang, and Charles G. Drake
Th1, Th17, and Th9 Effector Cells Induce Experimental Autoimmune Encephalomyelitis with Different Pathological Phenotypes
Anneli Jäger, Valérie Dardalhon, Raymond A. Sobel, Estelle Bettelli, and Vijay K. Kuchroo

Recruitment of Sprouty1 to Immune Synapse Regulates T Cell Receptor Signaling
Jun Sung Lee, Ji Eun Lee, Yu Mi Oh, Jong Bae Park, Heonik Choi, Chung Yeon Choi, In-Hoo Kim, Seung Hoon Lee, and Kyungho Choi

Processing in the Endoplasmic Reticulum Generates an Epitope on the Insulin A Chain that Stimulates Diabetogenic CD8 T Cell Responses
Helen Broi, Michael Reiser, Tarvo Rajasalu, Andreas Sypantitis, Franz Oswald, Bernhard Otto Boehm, and Reinhold Schirrmbeck

Ineffective Vaccination against Solid Tumors Can Be Enhanced by Hematopoietic Cell Transplantation

P-Selectin Glycoprotein Ligand-1 Negatively Regulates T-Cell Immune Responses
Masanori Matsumoto, Masayuki Miyasaka, and Takako Hirata

Dynamic Regulation of Notch 1 and Notch 2 Surface Expression during T Cell Development and Activation Revealed by Novel Monoclonal Antibodies
Emma Fiorini, Estelle Merck, Anne Wilson, Isabel Ferrero, Wei Jiang, Ute Koch, Floriana Aderet, Elisa Laurenti, Fabienne Tacchini-Cottier, Michel Pierses, Freddy Radtke, Sanjiv A. Luther, and H. Robson MacDonald

Inhibition of RANK Expression and Osteoclastogenesis by TLRs and IFN-γ in Human Osteoclast Precursors
Jong-Dae Ji, Kyung-Hyun Park-Min, Zenxin Shen, Roberto J. Fajardo, Steven R. Goldring, Kevin P. McHugh, and Lionel B. Ivashkiv

SHP-2 Expression Negatively Regulates NK Cell Function
Amanda K. Purdy and Kerry S. Campbell

MHC Drives TCR Repertoire Shaping, but not Maturation, in Recent Thymic Emigrants
Evan G. Houston, Jr. and Pamela J. Fink

Ectopic T-bet Expression Licenses Dendritic Cells for IL-12-Independent Priming of Type 1 T Cells In Vitro

SLAT/Def6 Plays a Critical Role in the Development of Th17 Cell-Mediated Experimental Autoimmune Encephalomyelitis
Ann J. Canonigo-Balancio, Camille Fos, Thomas Prod’homme, Stéphane Bécart, and Amnon Altman

A Nonadjuvanted Polypeptide Nanoparticle Vaccine Confers Long-Lasting Protection against Rodent Malaria
Stephen A. Kaba, Clara Brando, Qin Guo, Christian Mittelholzer, Senthilkumar Raman, David Tropel, Ueli Aebi, Peter Burkhard, and David E. Lanar

Autophagic Compartments Gain Access to the MHC Class II Compartments in Thymic Epithelium
Michiyuki Kasai, Isei Tanida, Takashi Uno, Eiki Kominami, Sachiko Seki, Toshiki Ikeda, and Toshiaki Mizuochi

T Cell Intrinsic Heterodimeric Complexes between HVEM and BTLA Determine Receptivity to the Surrounding Microenvironment
Timothy C. Cheung, Lisa M. Oborne, Marcos W. Steinberg, Matthew G. Mackay, Satoshi Fukuyama, Hideki Sanjo, Claire D’Souza, Paula S. Norris, Klaus Pfeffer, Kenneth M. Murphy, Mitchell Kronenberg, Patricia G. Spear, and Carl F. Ware

Role of T Cell TGFβ Signaling and IL-17 in Allograft Acceptance and Fibrosis Associated with Chronic Rejection
Susan M. Faust, Guanyi Lu, Bernard L. Marini, Weiping Zou, David Gordon, Yoichiro Iwakura, Yasmina Laouar, and D. Keith Bishop
TGFβ Neutralization within Cardiac Allografts by Decorin Gene Transfer Attenuates Chronic Rejection
Susan M. Faust, Guanyi Lu, Sherri C. Wood, and D. Keith Bishop

Taking Advantage: High-Affinity B Cells in the Germinal Center Have Lower Death Rates, but Similar Rates of Division, Compared to Low-Affinity Cells
Shannon M. Anderson, Ashraf Khalil, Mohamed Uddman, Uri Hersberg, Yoram Louzoun, Ann M. Haberman, Steven H. Kleinstein, and Mark J. Shlomchik

Endogenous IL-21 Restricts CD8+ T Cell Expansion and Is not Required for Tumor Immunity
Henrik Søndergaard, Jonathan M. Coquet, Adam P. Ulrich, Nicole McLaughlin, Dale J. Godfrey, Pallavar V. Sivakumar, Kresten Skak, and Mark J. Smyth

Dynamic Regulation of CXCR1 and CXCR2 Homo- and Heterodimers
Laura Martínez Muñoz, Pilar Lucas, Gemma Navarro, Ana I. Checa, Rafael Franco, Carlos Martínez-A., José Miguel Rodríguez-Prado, and Mario Mellado

Coexistence of Closed and Open Conformations of Complement Factor B in the Alternative Pathway C3bB(Mg2+) Proconvertase
Eva Torreira, Agustín Tortajada, Tamara Montes, Santiago Rodríguez de Córdoba, and Oscar Llorca

Hematopoietic Lineage Cell-Specific Protein 1 Is Recruited to the Immunological Synapse by IL-2-Inducible T Cell Kinase and Regulates Phospholipase Cγ1 Microcluster Dynamics during T Cell Spreading
Esteban Carrizosa, Timothy S. Gomez, Christine M. Labno, Deborah A. Kluh Dehring, Xiaohong Liu, Bruce D. Freedman, Daniel D. Billadeau, and Janis J. Burkhardt

Serine 649 Phosphorylation within the Protein Kinase C-Regulated Domain Down-Regulates CARMA1 Activity in Lymphocytes
Miguel E. Moreno-García, Karen Sommer, Claudia Haftmann, Clayton Sontheimer, Sarah F. Andrews, and David J. Rawlings

MAP44, a Human Protein Associated with Pattern Recognition Molecules of the Complement System and Regulating the Lectin Pathway of Complement Activation

MAPK, Phosphatidylinositol 3-Kinase, and Mammalian Target of Rapamycin Pathways Converge at the Level of Ribosomal Protein S6 Phosphorylation to Control Metabolic Signaling in CD8 T Cells
Robert J. Salmond, Juliet Emery, Klaus Okkenhaug, and Rose Zamoyska

The DC-SIGN of Zebrafish: Insights into the Existence of a CD209 Homologue in a Lower Vertebrate and Its Involvement in Adaptive Immunity
Ai-Fu Lin, Li-Xin Xiang, Qu-Long Wang, Wei-Ren Dong, Yong-Feng Gong, and Jian-Zhong Shao

Increased Inflammation, Impaired Bacterial Clearance, and Metabolic Disruption after Gram-Negative Sepsis in Mkp-1-Deficient Mice
W. Joshua Frazier, Xianxi Wang, Lyn M. Wauket, Xiang-An Li, Xiaomei Meng, Leif D. Nelin, Andrew C. B. Cato, and Yusen Liu

Early Response of Mucosal Epithelial Cells during Toxoplasma gondii Infection
Chia-Hsin Ju, Annapoorni C dochakingam, and Cynthia A. Leifer

Immune Gene and Cell Enrichment Is Associated with a Good Prognosis in Ependymoma
Andrew M. Donson, Diane K. Birks, Valerie N. Barton, Qi Wei, Bette K. Kleinschmidt-DeMasters, Michael H. Handler, Allen E. Waziri, Michael Wang, and Nicholas K. Foreman
7441 Neutrophils Ameliorate Lung Injury and the Development of Severe Disease during Influenza Infection
Michelle D. Tate, Yi-Mo Deng, Jessica E. Jones, Gary P. Anderson, Andrew G. Brooks, and Patrick C. Reading

7451 Identification of Lipoteichoic Acid as a Ligand for Draper in the Phagocytosis of Staphylococcus aureus by
Drosophila Hemocytes
Yumi Hashimoto, Yukichika Tabuchi, Kenji Sakurai, Mayumi Kutsuna, Kenji Kurokawa, Takeshi Awasaki,
Kazuhisa Sekimizu, Yoshihiko Nakanishi, and Akiko Shiratsuchi

INFLAMMATION

7461 TLR Cross-Talk Specifically Regulates Cytokine Production by B Cells from Chronic Inflammatory
Disease Patients
Madhumita Jagannathan, Hatice Hasturk, Yan-Mei Liang, Hynnjin Shin, Jeremy T. Hetzel, Alpdogan Kantarci,
Daniel Rubin, Marie E. McDonnell, Thomas E. Van Dyke, Lisa M. Gasely-Leal, and Barbara S. Nikolajczyk

7471 Lipopolysaccharide Sensitizes Neonatal Hypoxic-Ischemic Brain Injury in a MyD88-Dependent Manner
Xiaojiang Wang, Linnea Stridh, Wenli Li, Justin Dean, Anders Elsgren, Liming Gan, Kristina Eriksson, Henrik Hagberg,
and Carina Mallard

7481 CCR5 Ligands Modulate CXCL12-Induced Chemotaxis, Adhesion, and Akt Phosphorylation of Human
Cord Blood CD34+ Cells
Sunanda Basu and Hal E. Broxmeyer

7489 The Oxazolidinone Derivative Locostatin Induces Cytokine App easement
Antoine Ménoret, Jeremy P. McAleer, Suo-Mun Ngoi, Suagataam Ray, Nicholas A. Eddy, Gabriel Fenteany, Seung-Joo Lee,
Robert J. Rosi, Bijay Mukherji, David L. Allen, Nitya G. Chakraborty, and Anthony T. Vella

7491 Calcium-Independent Phospholipase A2/ Akt Signaling Is Involved in Lipopolysaccharide-Induced
NADPH Oxidase 1 Expression and Foam Cell Formation
Sun-Hye Lee, Dae-Weon Park, Sung Chul Park, Yun-Ki Park, Seong Yeon Hong, Jae-Ryong Kim, Chua-Hee Lee,
and Suk-Hwan Baek

7501 CD80 Blockade Enhance Glucocorticoid-Induced Leucine Zipper Expression and Suppress Experimental
Autoimmune Encephalomyelitis
Shailesh P. Dudhgaonkar, Sribiari J. Janardhanan, Krisshika N. Kodumudi, and Mythily Srinivasan

7511 G Protein-Coupled Receptor 43 Is Essential for Neutrophil Recruitment during Intestinal Inflammation
Christian Sina, Olga Gavrillova, Matti Förster, Andreas Till, Stefanie Derer, Friederike Hildebrand, Björn Raabe,
Athena Chalaris, Jürgen Scheller, Arecurr Rehmann, Andre Franke, Stephan Ott, Robert Häler, Susanna Nikolaus,
Ulrich R. Fölsch, Stefan Rose-John, Hui-Ping Jiang, Jun Li, Stefan Schreiber, and Philip Rosenstiel

7521 Natural Occurring IL-17 Producing T Cells Regulate the Initial Phase of Neutrophil Mediated
Airway Responses
Shinya Tanaka, Takayuki Yoshimoto, Tetsuji Naka, Susumu Nakae, Yo-ichi Iwakura, Daniel Cua, and Masato Kubo

7531 Fms-Like Tyrosine Kinase 3 Ligand Regulates Migratory Pattern and Antigen Uptake of Lung Dendritic
Cell Subsets in a Murine Model of Allergic Airway Inflammation
Zhifei Shao, Toluwalope O. Makinde, Halvor S. McGee, Xiang Wang, and Devendra K. Agrawal

7541 Tyrosine Kinase 2 Plays Critical Roles in the Pathogenic CD4 T Cell Responses for the Development of
Experimental Autoimmune Encephalomyelitis
Akiko Oyamada, Hiori Ikebe, Monoo Issumi, Hirokazu Saiwai, Seiji Okada, Kazuza Shimoda, Yoichiro Iwakura,
Keiichi I. Nakayama, Yuichi Iwamoto, Yasunobu Yoshikai, and Hisakata Yamada

7551 Unlike Th1, Th17 Cells Mediate Sustained Autoimmune Inflammation and Are Highly Resistant to
Restimulation-Induced Cell Death
Guangpu Shi, Madhu Ramaswamy, Barbara P. Vistica, Catherine A. Cox, Cuiyan Tan, Eric F. Wawrousek,
Richard M. Siegel, and Igal Gery

7561 Selective Down-Regulation of Neutrophil Mac-1 in Endotoxemic Hepatic Microcirculation via IL-10
Gustavo Battista Menezes, Woo-Yong Lee, Hong Zhou, Christopher Curtis Matchett Waterhouse, Denise Carmona Cara,
and Paul Kubes
Clinical Immunology

Systematic Classification of Primary Immunodeficiencies Based on Clinical, Pathological, and Laboratory Parameters
Crina Samarghitean, Csaba Ortutay, and Mauno Vihinen

The Cutaneous Biochemical Redox Barrier: A Component of the Innate Immune Defenses against Sensitization by Highly Reactive Environmental Xenobiotics
Chris Pickard, Fethi Louafi, Carolann McGuire, Kelly Lowings, Pawan Kumar, Hywel Cooper, Rebecca J. Dearman, Marie Cumberbatch, Ian Kimber, Eugene Healy, and Peter S. Friedmann

β Cell-Specific CD4+ T Cell Clonotypes in Peripheral Blood and the Pancreatic Islets Are Distinct
Li Li, Qiuming He, Alaina Garland, Zuoan Yi, Lydia T. Aybar, Thomas B. Kepler, Jeffrey A. Frelinger, Bo Wang, and Roland Tisch

Immunomodulation of Nasal Epithelial Cells by Staphylococcus aureus-Derived Serine Proteases
Claudia Rudack, Florian Sachse, Nils Albert, Karsten Becker, and Christof von Eiff

CD39+Foxp3+ Regulatory T Cells Suppress Pathogenic Th17 Cells and Are Impaired in Multiple Sclerosis
Jean M. Fletcher, Roisin Lonergan, Lisa Costelloe, Katie Kinsella, Barry Moran, Cliona O’Farrelly, Niall Tubridy, and Kingston H. G. Mills

Corrections

Author Index