3801 IN THIS ISSUE

LETTERS TO THE EDITOR
3803 Comment on “Epigenetic Reduction in Invariant NKT Cells following In Utero Vitamin D Deficiency in Mice”
Giulio Disanto, Adam E. Handel, Julia M. Morahan, and Sreeram V. Ramagopalan

PILLARS OF IMMUNOLOGY
3805 The Resurrection of T Cell-Mediated Suppression
Ethan M. Shevach

Shimon Sakaguchi, Noriko Sakaguchi, Masanao Asano, Misako Itoh, and Masaaki Toda

BRIEF REVIEWS
3823 Protective B Cell Responses to Flu—No Fluke!
Elizabeth E. Waffarn and Nicole Baumgarth

CUTTING EDGE
3831 Cutting Edge: Vasostatin-1–Derived Peptide ChgA29–42 Is an Antigenic Epitope of Diabetogenic BDC2.5 T Cells in Nonobese Diabetic Mice
Enayat Nikoopour, Christian Sandrock, Katrina Huzarik, Olga Krougly, Edwin Lee-Chan, Emma L. Masteller, Jeffrey A. Bluestone, and Bhagirath Singh

3836 Cutting Edge: Attrition of Plasmodium-Specific Memory CD8 T Cells Results in Decreased Protection That Is Rescued by Booster Immunization
Nathan W. Schmidt and John T. Harty

3841 Cutting Edge: Primary Innate Immune Cells Respond Efficiently to Polymeric Peptidoglycan, but Not to Peptidoglycan Monomers
Janaki K. Iyer and K. Mark Coggeshall

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

3847 Nondominant CD8 T Cells Are Active Players in the Vaccine-Induced Antitumor Immune Response
Jennifer N. Uram, Chelsea M. Black, Emilee Flynn, Langbing Huang, Todd D. Armstrong, and Elizabeth M. Jaffee

3858 MyD88-Dependent SHIP1 Regulates Proinflammatory Signaling Pathways in Dendritic Cells after Monophosphoryl Lipid A Stimulation of TLR4
Caglar Cekic, Carolyn R. Casella, Duygu Sag, Frann Antignano, Joseph Kolb, Jill Suttles, Michael R. Hughes, Gerald Krystal, and Thomas C. Mitchell

3866 Beraprost Enhances the APC Function of B Cells by Upregulating CD86 Expression Levels
Jini Kim, Chan-Sik Park, Chan-Hun Park, Doo-II Jeong, Young-Myeong Kim, and Jongseon Choe

3874 Differential B7–CD28 Costimulatory Requirements for Stable and Inflammatory Mouse Cytomegalovirus-Specific Memory CD8 T Cell Populations
Ramon Arens, Andrea Loewendorf, Anke Redeker, Sophie Sierro, Louis Boon, Paul Klenerman, Chris A. Benedict, and Stephen P. Schoenerberger

3882 Repeated In Vivo Stimulation of T and B Cell Responses in Old Mice Generates Protective Immunity against Lethal West Nile Virus Encephalitis
Jennifer L. Uhrlaub, James D. Brien, Douglas G. Widman, Peter W. Mason, and Janko Nikolich-Zugich

3892 Regulation of GATA-3 Expression during CD4 Lineage Differentiation
Idoia Gimferrer, Taishan Hu, Annie Simmons, Chi Wang, Abdallah Souabni, Meinrad Busslinger, Timothy P. Bender, Gabriela Hernandez-Hoyos, and Jose Alberola-Ila

3911 Ly49-Dependent NK Cell Licensing and Effector Inhibition Involve the Same Interaction Site on MHC Ligands
Taewoong Choi, Stephen T. Ferris, Naoki Matsumoto, Jennifer Poursine-Laurent, and Wayne M. Yokoyama

3918 Plasticity of Human Regulatory T Cells in Healthy Subjects and Patients with Type 1 Diabetes
Stephanie A. McClymont, Amy L. Putnam, Michael R. Lee, Jonathan H. Eeesten, Weihong Liu, Maigan A. Hulme, Ulrich Hoffmann, Udo Baron, Sven Olek, Jeffrey A. Bluestone, and Todd M. Brusko

3927 Defining the Herpes Simplex Virus-Specific CD8+ T Cell Repertoire in C57BL/6 Mice
Anthony J. St. Leger, Bjoern Peters, John Sidney, Alessandro Sette, and Robert L. Hendricks

3934 The Phosphatase Src Homology Region 2 Domain-Containing Phosphatase-1 Is an Intrinsic Central Regulator of Dendritic Cell Function
Indu R. Ramachandran, Weitao Song, Natalia Lapteva, Mamatha Seethammagarlu, Kevin M. Slawin, David M. Spencer, and Jonathan M. Levitt

3946 T Cell Factor-1 Negatively Regulates Expression of IL-17 Family of Cytokines and Protects Mice from Experimental Autoimmune Encephalomyelitis
Qing Yu, Archana Sharma, Anand Gohil, and Jyoti Misra Sen

3953 Role of SLAM in NKT Cell Development Revealed by Transgenic Complementation in NOD Mice
Margaret A. Jordan, Julie M. Fletcher, Roby Jose, Shabhead Chowdhury, Nicole Gerlach, Janette Allison, and Alan G. Baxter

3966 Identification of a New Phenotype of Tolerogenic Human Dendritic Cells Induced by Fungal Proteases from Aspergillus oryzae
Aline Zimmer, Sonia Luce, Fanny Gaignier, Emmanuel Nonty, Marie Naveau, Armelle Biot-Vidamment, Marc Pallardy, Laurence Van Overtveld, Laurent Mascarel, and Philippe Moingeon
3977 IL-27 and IL-21 Are Associated with T Cell IL-10 Responses in Human Visceral Leishmaniasis
Nasim Akhtar Ansari, Rajiv Kumar, Shalini Gautam, Susanne Nylén, Om Prakash Singh, Shyam Sundar, and David Sacks

3986 Histone Deacetylase Inhibitor LAQ824 Augments Inflammatory Responses in Macrophages through Transcriptional Regulation of IL-10

3997 Vaccination against Lymphocytic Choriomeningitis Virus Infection in MHC Class II-Deficient Mice
Peter Johannes Holst, Jan Pravsgaard Christensen, and Allan Randrup Thomsen

4008 Simian Immunodeficiency Virus Infection in the Brain and Lung Leads to Differential Type I IFN Signaling during Acute Infection
Luna Alammar, Lucio Gama, and Janice E. Clements

4019 β1 Integrin Is Critical for the Maintenance of Antigen-Specific CD4 T Cells in the Bone Marrow but Not Long-Term Immunological Memory
Christopher C. DeNucci and Yoji Shimizu

4027 Genome-Wide Expression Profiling Identifies an Impairment of Negative Feedback Signals in the Crohn’s Disease-Associated NOD2 Variant L1007fsinsC
Susanne Billmann-Born, Andreas Till, Alexander Arli, Simone Lipinski, Christian Sina, Anna Latiano, Vito Annese, Robert Häser, Martin Kerick, Thomas Manke, Dirk Seegert, Adedayo Hanidu, Heiner Schäfer, David van Heel, Jun Li, Stefan Schreiber, and Philip Rosenstiel

4039 Migration and Homeostasis of Naive T Cells Depends on Coronin 1-Mediated Prosurvival Signals and Not on Coronin 1-Dependent Filamentous Actin Modulation
Philipp Mueller, Xiaolong Liu, and Jean Pieters

4051 KLRG1 ‘NKG2A’ CD8 T Cells Mediate Protection and Participate in Memory Responses during γ-Herpesvirus Infection
Stephanie S. Cusco and Emilio Flano

4059 Bid and Bim Collaborate during Induction of T Cell Death in Persistent Infection
Frederick Masson, Fiona Kupresanin, Adele Mount, Andreas Strasser, and Gabrielle T. Belz

4067 A Novel Tumor-Associated Pancreatic Glycoprotein Is Internalized by Human Dendritic Cells and Induces Their Maturation
Cécile Franceschi, Aurélie Collignon, Daniel Isnardon, Liliane Beskoel, Alain Vérine, Françoise Siley, Jean-Paul Bernard, Dominique Lombardo, Evelyne Beraud, Daniel Olive, and Eric Mas

4078 Targeting of a T Cell Agonist Peptide to Lysosomes by DNA Vaccination Induces Tolerance in the Nonobese Diabetic Mouse
Elisa I. Rivas, John P. Driver, Nahid Garabatos, Maximiliano Presa, Conchi Mora, Fernando Rodriguez, David V. Serreze, and Thomas Stratmann

4088 Conformational Switching in Ezrin Regulates Morphological and Cytoskeletal Changes Required for B Cell Chemotaxis
Neetha Parameswaran, Ken Matsui, and Neetu Gupta

4098 Stat6 and c-Jun Mediate Th2 Cell-Specific IL-24 Gene Expression
Anupama Sahoo, Choong-Gu Lee, Arijita Jash, Jun-Seock Son, Gicheon Kim, Ho-Keun Kwon, Jae-Seon So, and Sin-Hyeog Im

4110 Protection from RNA and DNA Viruses by IL-32
Jarod A. Zepp, Claudia A. Nold-Petry, Charles A. Dinarello, and Marcel F. Nold

4119 HIV-1 Tat-Mediated Induction of Platelet-Derived Growth Factor in Astrocytes: Role of Early Growth Response Gene 1
Crystal Bethel-Brown, Honghong Yao, Shannon Callen, Young Han Lee, Prasanta K. Dash, Anil Kumar, and Shilpa Buch
A New Zealand Black-Derived Locus Suppresses Chronic Graft-versus-Host Disease and Autoantibody Production through Nonlymphoid Bone Marrow-Derived Cells
Zhiwei Xu, Anusha Vallurupalli, Christopher Fuhrman, David Ostrov, and Laurence Morel

Translational Control of NKT Cell Cytokine Production by p38 MAPK
Viswas K. Nagaleekar, Guadalupe Sabio, Idil Akbö, Alan Chant, Isaac W. Howe, Tina M. Thornton, Patrick J. Benoit, Roger J. Davis, Mercedes Rincon, and Jonathan E. Boyson

Common Lymphatic Endothelial and Vascular Endothelial Receptor-1 Mediates the Transmigration of Regulatory T Cells across Human Hepatic Sinusoidal Endothelium
Shishir Shetty, Christopher J. Weston, Ye H. Oo, Nina Westerlund, Zania Stamatakis, Janine Youter, Stefan G. Hubscher, Marko Salmi, Sirpa Jalkanen, Patricia F. Llor, and David H. Adams

CC and CXC Chemokines Induce Airway Smooth Muscle Proliferation and Survival
Rabih Halwani, Jehan Al-Abri, Marianne Beland, Hamdan Al-Jahdali, Andrew J. Halayko, Tak H. Lee, Saleh Al-Muheisen, and Qutayba Hamid

Embryonic Stem Cells, Derived Either after In Vitro Fertilization or Nuclear Transfer, Prolong Survival of Semiallogeneic Heart Transplants
Barbara Imberti, Federica Castraghi, Daniela Cugini, Nadia Azzollini, Paola Casis, Marta Todeschini, Samantha Solini, Vittorio Sebastian, Maurizio Zuccotti, Silvia Garagia, Carlo Alberto Redi, Marina Noris, Marina Morigi, and Giuseppe Remuzzi

The Tachykinins Substance P and Hemokinin-1 Favor the Generation of Human Memory Th17 Cells by Inducing IL-1β, IL-23, and TNF-Like 1A Expression by Monocytes
Pierre Cunin, Antoine Caillon, Murielle Corvaisier, Erwan Garo, Mari Scotet, Simon Blanchard, Yves Delneste, and Pascale Jeannin

Angiopoietin 2 Stimulates TIE2-Expressing Monocytes To Suppress T Cell Activation and To Promote Regulatory T Cell Expansion
Seth B. Coffelt, Yung-Yi Chen, Munitta Mathana, Abigail F. Welford, Andrea O. Tal, Alexander Schola, Karl H. Plate, Yvonne Reiss, Craig Murdoch, Michele De Palma, and Claire E. Lewis

Rapid Reconstitution of Antibody Responses Following Transplantation of Purified Allogeneic Hematopoietic Stem Cells
Jessica A. Linderman and Judith A. Shizuru

Phenotype, Function, and Gene Expression Profiles of Programmed Death-1 hi CD8 T Cells in Healthy Human Adults

A Point Mutation in the Amino Terminus of TLR7 Abolishes Signaling without Affecting Ligand Binding
Carlo Iavarone, Katrin Ramsauer, Andriy V. Kubarenko, Jason C. Debasitis, Igor Leykin, Alexander N. R. Weber, Owen M. Sieg, Bruce Beudler, Pu Zhang, Gillis Otten, Ugo D'Oro, Nicholas M. Valiante, M. Lamine Mbow, and Alberto Visintin

Antibody-Mediated Coengagement of FcγRIIb and B Cell Receptor Complex Suppresses Humoral Immunity in Systemic Lupus Erythematosus
Holly M. Horton, Seung Y. Chu, Elizabeth C. Ortiz, Erik Pong, Saso Cemerski, Irene W. L. Leung, Noam Jacob, Jonathan Zalewsky, John R. Dejaarlais, William Stohl, and David E. Szynkowski

Modulation of Innate and Adaptive Immune Responses by Tofacitinib (CP-690,550)
ADAM10 Overexpression Shifts Lympho- and Myelopoiesis by Dysregulating Site 2/Site 3 Cleavage Products of Notch
David R. Gibb, Sheinei J. Saleem, Dae-Joong Kang, Mark A. Subler, and Daniel H. Conrad

The Airway Antigen Sampling System: Respiratory M Cells as an Alternative Gateway for Inhaled Antigens
Dong-Young Kim, Ayuko Sato, Satoshi Fukuyama, Hiroshi Sagara, Takahiro Nagatake, Il Gyu Kong, Kaoru Goda, Tomonori Nochi, Jun Kuniiawa, Shintaro Sato, Yoshifumi Yokota, Chul Hee Lee, and Hiroshi Kyono

Molecular and Structural Immunology

Chaperone Activity of α B-Crystallin Is Responsible for Its Incorrect Assignment as an Autoantigen in Multiple Sclerosis
Jonathan B. Rothbard, Xianyan Zhao, Orr Sharpe, Michael J. Strohman, Michael Kurnellas, Elizabeth D. Mellins, William H. Robinson, and Lawrence Steinman

Protection of Nonself Surfaces from Complement Attack by Factor H-Binding Peptides: Implications for Therapeutic Medicine
You-Qiang Wu, Hongchang Qu, Georgia Sfyroera, Apostolia Tzekou, Brian K. Kay, Bo Nilson, Kristina Nilsson Ekdahl, Daniel Ricklin, and John D. Lambris

Immunogenetics

Testing the Role of P2X7 Receptors in the Development of Type 1 Diabetes in Nonobese Diabetic Mice
Yi-Guang Chen, Felix Schepulein, John P. Driver, Amanda A. Hewes, Peter C. Reifsnnyder, Edward H. Leiter, and David V. Serreze

A Mechanism for TCR Sharing between T Cell Subsets and Individuals Revealed by Pyrosequencing
Vanessa Venturi, Mairé F. Quigley, Hui Yee Greenaway, Pauline C. Ng, Zachary S. Ende, Tina McIntosh, Tedi E. Asher, Jorge R. Almeida, Samuel Levy, David A. Price, Miles P. Davenport, and Daniel C. Douek

Host Defense

Strongyloides ratti Infection Induces Expansion of Foxp3+ Regulatory T Cells That Interfere with Immune Response and Parasite Clearance in BALB/c Mice
Birte Blankenhaus, Ulrike Klemm, Marie-Luise Eschbach, Tim Sparwasser, Jochen Huehn, Anja A. Kühl, Christoph Loddenkemper, Thomas Jacobs, and Minka Breloer

Alcohol Suppresses the Granulopoietic Response to Pulmonary Streptococcus pneumoniae Infection with Enhancement of STAT3 Signaling
Robert W. Siggins, John N. Melvan, David A. Welsh, Gregory J. Bagby, Steve Nelson, and Ping Zhang

TLR8 Activates HIV from Latently Infected Cells of Myeloid-Monocytic Origin Directly via the MAPK Pathway and from Latently Infected CD4+ T Cells Indirectly via TNF-α
Erika Schlaepfer and Roberto F. Speck

Tumor-Produced Secreted Form of Binding of Immunoglobulin Protein Elicits Antigen-Specific Tumor Immunity
Yasuaki Tamura, Yoshihiko Hirohashi, Goro Kutomi, Katsuya Nakanishi, Kenjirou Kamiguchi, Toshihiko Torigoe, and Noriyuki Sato

Contributions of Antinucleoprotein IgG to Heterosubtypic Immunity against Influenza Virus
Mark W. LaMere, Ho-Tak Lam, Amy Moquin, Laura Haynes, Frances E. Lund, Troy D. Randall, and Denise A. Kaminski

Inflammation

α7-Cholinergic Receptor Mediates Vagal Induction of Splenic Norepinephrine
Gergely Vida, Geber Peña, Edwin A. Deitch, and Luis Ulloa

Sphingosylphosphorylcholine Stimulates CCL2 Production from Human Umbilical Vein Endothelial Cells
Ha Young Lee, Sun Young Lee, Sang Doo Kim, Jae Woong Shim, Hak Jung Kim, Young Su Jung, Jae Young Kwon, Suk-Hwan Baek, Junho Chung, and Yoe-Sik Bae
Cross Talk between Glucocorticoid and Estrogen Receptors Occurs at a Subset of Proinflammatory Genes
Aleksandra Czoro, Chaohen Yuan, Sreenivasan Parthiyil, Oliver H. Miller, Keith R. Yamamoto, and Dale C. Leitman

Platelets Participate in Synovitis via Cox-1–Dependent Synthesis of Prostacyclin Independently of Microparticle Generation
Eric Boilard, Katherine Larabee, Ruidan Shnayder, Kathleen Jacobs, Richard W. Farnsdale, Jerry Ware, and David M. Lee

Hypoxia-Inducible Factor-1α–Dependent Protection from Intestinal Ischemia/Reperfusion Injury Involves Ecto-5′-Nucleotidase (CD73) and the A2B Adenosine Receptor
Melanie L. Hart, Almut Grenz, Iris C. Gorzolla, Jens Schittenhelm, Julee H. Dalton, and Holger K. Eltzschig

The Danger Signal, Extracellular ATP, Is a Sensor for an Airborne Allergen and Triggers IL-33 Release and Innate Th2-Type Responses
Hideaki Kouzaki, Koji Iijima, Takao Kobayashi, Scott M. O’Grady, and Hirohito Kita

IL-17+ Regulatory T Cells in the Microenvironments of Chronic Inflammation and Cancer
Ilona Kryczek, Ke Wu, Ende Zhao, Shuang Wei, Lishua Vatan, Wojciech Szelig, Emina Huang, Joel Greenson, Alfred Chang, Jacek Roliński, Piotr Radwanski, Jingyuan Fang, Guobin Wang, and Weiping Zou

N-α-Benzoyl-N5-(2-Chloro-1-Iminoethyl)-L-Ornithine Amide, a Protein Arginine Deiminase Inhibitor, Reduces the Severity of Murine Collagen-Induced Arthritis

GroEL1, a Heat Shock Protein 60 of Chlamydia pneumoniae, Induces Lectin-Like Oxidized Low-Density Lipoprotein Receptor 1 Expression in Endothelial Cells and Enhances Atherogenesis in Hypercholesterolemic Rabbits
Feng-Yen Lin, Yi-Wen Lin, Chun-Yao Huang, Yu-Jia Chang, Nai-Wen Tao, Neun-Chung Chang, Keng-Liang Ou, Tsu-Liang Chen, Chun-Ming Shih, and Yung-Hsiang Chen

IL-9 Promotes Th17 Cell Migration into the Central Nervous System via CC Chemokine Ligand-20 Produced by Astrocytes
Yan Zhou, Yoshifumi Sonobe, Tomohiko Akahori, Shijie Jin, Jun Kawanokuchi, Mariko Noda, Yoichiro Iwakura, Tetsuya Mizuno, and Akio Suzumura

Rapid Recruitment and Activation of Macrophages by Anti-Gal/α-Gal Liposome Interaction Accelerates Wound Healing
Kim M. Wigglesworth, Waldemar J. Racki, Rabih Kanouty-Mishra, Eva Saamolanyi-Tsuda, Dale L. Greiner, and Uri Galili

Conjunctival Goblet Cell Secretion Stimulated by Leukotrienes Is Reduced by Resolvins D1 and E1 To Promote Resolution of Inflammation
Darlene A. Dartt, Robin R. Hodges, Dayu Li, Marie A. Shatos, Kameran Laibkani, and Charles N. Serhan

Low-Dose Endotoxin Induces Inflammation by Selectively Removing Nuclear Receptors and Activating CCAAT/Enhancer-Binding Protein δ
Urmila Maitra, Lu Gan, Samantha Chang, and Liwu Li

Dermatitis Herpetiformis Sera or Goat Anti–Transglutaminase-3 Transferred to Human Skin-Grafted Mice Mimics Dermatitis Herpetiformis Immunopathology

CLINICAL IMMUNOLOGY
Distinct Roles of IL-23 and IL-17 in the Development of Psoriasis-Like Lesions in a Mouse Model
Kimiko Nakajima, Takashi Kanda, Mikiro Takaishi, Takeo Shiga, Ken Miyoshi, Hideki Nakajima, Reiko Kamijima, Masahito Tarutani, Jacqueline M. Benson, M. Merle Elloso, Lester L. Gutshall, Michael F. Naso, Yoichiro Iwakura, John DiGiovanni, and Shigetoshi Sano

Invariant NKT Cell Reconstitution in Pediatric Leukemia Patients Given HLA-Haploidentical Stem Cell Transplantation Defines Distinct CD4+ and CD4– Subset Dynamics and Correlates with Remission State
Claudia de Lalla, Anna Rinaldi, Daniela Montagna, Laura Azzimonti, Maria Ester Bernardo, Laura M. Sangalli, Anna Maria Paganoni, Rita Maccario, Alessandra Di Cesare-Merlone, Marco Zecca, Franco Locatelli, Paolo Dellabona, and Giulia Casorati

Decreased Thymic Output Accounts for Decreased Naive T Cell Numbers in Children with Down Syndrome
Beatrijs L. P. Bloemers, Louis Bont, Roel A. de Weger, Sigrid A. Otto, Jose A. Borghans, and Kiki Tesselaar

Promoter Hypomethylation Results in Increased Expression of Protein Phosphatase 2A in T Cells from Patients with Systemic Lupus Erythematosus
Katsue Sunahori, Yuang-Taung Juang, Vasileios C. Kyttaris, and George C. Tsokos

B Cells as a Therapeutic Target for IFN-β in Relapsing–Remitting Multiple Sclerosis
Vinod S. Ramgolam, Yonggang Sha, Karen L. Marcus, Neelima Choudhary, Luigi Troiani, Manisha Chopra, and Silva Markovic-Plese

CORRECTIONS

Correction: Absent Bactericidal Activity of Mouse Serum Against Invasive African Nontyphoidal Salmonella Results from Impaired Complement Function but Not a Lack of Antibody

AUTHOR INDEX