This information is current as of July 6, 2021.
IN THIS ISSUE

PILLARS OF IMMUNOLOGY

2739 To Each (MHC Molecule) Its Own (Binding Motif)
Linda A. Sherman

Kirsten Falk, Olaf Rötzschke, Stefan Stevanovic, Günther Jung, and Hans-Georg Rammensee

BRIEF REVIEWS

2749 B-1 B Cell Development
Richard R. Hardy

CUTTING EDGE

2755 Cutting Edge: Interleukin 4-Dependent Mast Cell Proliferation Requires Autocrine/Intracrine Cysteinyl Leukotriene-Induced Signaling
Yongfeng Jiang, Yoshifde Kanaoka, Chunl Feng, Karl Noack, Sudhir Rao, and Joshua A. Boyce

2760 Cutting Edge: IL-23 Cross-Regulates IL-12 Production in T Cell-Dependent Experimental Colitis
Christoph Becker, Heike Dornhoff, Clemens Neufert, Massimo C. Fantini, Stefan Wirtz, Sabine Huehner, Alexei Nikolaev, Hans-Anton Lehr, Andrew J. Murphy, David M. Valenzuela, George D. Yancopoulos, Peter R. Galile, Margaret Karow, and Markus F. Neurath

2765 Cutting Edge: Critical Role for A2A Adenosine Receptors in the T Cell-Mediated Regulation of Colitis
Makoto Naganuma, Elizabeth B. Wiznerowicz, Courtney M. Lappas, Joel Linden, Mark T. Worthington, and Peter B. Ernst

2770 Cutting Edge: Decreased Accumulation and Regulatory Function of CD4+CD25high T Cells in Human STAT5b Deficiency
Aileen C. Cohen, Kari C. Nadeau, Wenwei Tu, Vivian Hua, Kira Dionis, Liliana Bezrodnik, Alejandro Teper, Maria Guillard, Juan Heinrich, Alan M. Krensky, Ron G. Rosenfeld, and David B. Lewis

On the cover: Image shown is a pseudocolor overlay of toll-like receptor 4 (TLR4) immunofluorescence (green) and nuclear labeling with Hoechst 33258 (blue) in a frozen section of the ileum from formula-fed and hypoxia-stressed neonatal mice at postnatal 48 h. The intense apical TLR4 labeling in enterocytes is characteristic of samples from animals exposed to formula feeding and hypoxia and it is diminished in mother-fed pups. Jilling, T., D. Simon, J. Lu, F. J. Meng, D. Li, R. Schy, R. B. Thomson, A. Soliman, M. Arditi, and M. S. Caplan. 2006. The roles of bacteria and TLR4 in rat and murine models of necrotizing enterocolitis. J. Immunol. 177: 3273–3282.
CD103 Is A Marker For Alloantigen-Induced Regulatory CD8⁺ T Cells
Elena Uss, Ajda T. Rowshani, Berend Hooibrink, Neubury M. Lardy, René A. W. van Lier, and Ineke J. M. ten Berge

Age-Related CD8⁺ T Cell Clonal Expansions Express Elevated Levels of CD122 and CD127 and Display Defects in Perceiving Homeostatic Signals
Ilhem Messaoudi, Jessica Warner, and Janko Nikolich-Zugich

EBV Latent Membrane Protein 2A Induces Autoreactive B Cell Activation and TLR Hypersensitivity

Double-Negative T Regulatory Cells Can Develop Outside the Thymus and Do Not Mature from CD8⁺ T Cell Precursors
Megan S. Ford, Zhu-Xu Zhang, Wenhao Chen, and Li Zhang

Humoral Immune Response to Flagellin Requires T Cells and Activation of Innate Immunity
Catherine J. Sanders, Yimin Yu, Daniel A. Moore III, Ifor R. Williams, and Andrew T. Gewirtz

Molecular and Functional Characterization of CD300b, a New Activating Immunoglobulin Receptor Able to Transduce Signals through Two Different Pathways
Agueda Martinez-Barriocanal and Joan Sayós

Combinatorial SNARE Complexes Modulate the Secretion of Cytoplasmic Granules in Human Neutrophils
Faustino Mollinedo, Jero Calafat, Hans Jansen, Belén Martin-Martín, Javier Canchado, Svetlana M. Nabokina, and Consuelo Gajate

P2X7 Receptor-Dependent Cell Death Is Modulated during Murine T Cell Maturation and Mediated by Dual Signaling Pathways
Mitsutoshi Tsukimoto, Machiko Maebata, Hitoshi Harada, Akira Ikari, Kuniaki Takagi, and Masakuni Degawa

All-trans Retinoic Acid Stimulates IL-2-Mediated Proliferation of Human T Lymphocytes: Early Induction of Cyclin D3
Nikolai Engedal, Tone Gjevik, Rune Blomhoff, and Heidi Kiil Blomhoff

T Helper Lymphocytes Rescue CTL from Activation-Induced Cell Death
Richard Kennedy and Esteban Celis

Overcoming Original Antigenic Sin to Generate New CD8 T Cell IFN-γ Responses in an Antigen-Experienced Host
Xiao Song Liu, Joanne Dyer, Graham R. Leggatt, Germain J. P. Fernando, Jie Zhong, Ranjeny Thomas, and Ian H. Frazer

Primitive Lymphoid Progenitors in Bone Marrow with T Lineage Reconstituting Potential
S. Scott Perry, Robert S. Weiner, Taku Kouro, Paul W. Kincaide, and Xiao-Hong Sun

CD4 T Cell-Mediated Protection from Lethal Influenza: Perforin and Antibody-Mediated Mechanisms Give a One-Two Punch
Deborah M. Brown, Allison M. Dilzer, Dana L. Meents, and Susan L. Swain

Indirect Effects of Leptin Receptor Deficiency on Lymphocyte Populations and Immune Response in db/db Mice

DAP12 Signaling Regulates Plasmacytoid Dendritic Cell Homeostasis and Down-Modulates Their Function during Viral Infection
Hanna Sjölin, Scott H. Robbins, Gilles Besou, Åsa Hadmark, Elena Tomasello, Maria Johansson, Håkan Hall, Féroz Charifi, Gunilla B. Karlson Hedestam, Christine A. Biron, Klas Kärre, Petter Höglund, Eric Vivier, and Marc Dalod

Addition of a Prominent Epitope Affects Influenza A Virus-Specific CD8⁺ T Cell Immunodominance Hierarchies When Antigen Is Limiting
Misty Rayna Jenkins, Richard Webby, Peter C. Doherty, and Stephen J. Turner
2926 The Level of IgE Produced by a B Cell Is Regulated by Norepinephrine in a p38 MAPK- and CD23-Dependent Manner

2939 CD38 Is Required for the Peripheral Survival of Immunotolerogenic CD4+ Invariant NK T Cells in Nonobese Diabetic Mice
Yi-Guang Chen, Jing Chen, Melissa A. Osborne, Harold D. Chapman, Gurjyal S. Besra, Steven A. Porcelli, Edward H. Luster, S. Brian Wilson, and David V. Serreze

2948 CD4+ T Cell Expressed CD80 Regulates Central Nervous System Effector Function and Survival During Experimental Autoimmune Encephalomyelitis
Joseph R. Podojil, Adam P. Kohm, and Stephen D. Miller

2959 Phosphatidylinositol Mannoside from Mycobacterium tuberculosis Binds α3β1 Integrin (VLA-5) on CD4+ T Cells and Induces Adhesion to Fibronectin
Roxana E. Rojas, Jeremy J. Thomas, Adam J. Gehring, Preston J. Hill, John T. Belisle, Clifford V. Harding, and W. Henry Boom

2969 Requirement for CD70 in CD4+ Th Cell-Dependent and Innate Receptor-Mediated CD8+ T Cell Priming
Vadim Y. Taraban, Tania F. Rowley, David F. Tough, and Aymen Al-Shamkhani

2976 CD8+ Cytotoxic T-APC Stimulate Central Memory CD8+ T Cell Responses via Acquired Peptide-MHC Class I Complexes and CD80 Costimulation, and IL-2 Secretion
Dajing Xia, Siguo Hao, and Jim Xiang

2985 G12/G13 Family G Proteins Regulate Marginal Zone B Cell Maturation, Migration, and Polarization
Stefan Rieken, Antonia Sassmann, Susanne Herroeder, Barbara Wallenwein, Alexandra Moers, Stefan Offermanns, and Nina Wettschureck

2994 High-Affinity Ligand Probes of CD22 Overcome the Threshold Set by cis Ligands to Allow for Binding, Endocytosis, and Killing of B Cells
Brian E. Collins, Ola Blixt, Shoufa Han, Bao Duong, Hongyi Li, Jay K. Nathan, Nicolai Bovin, and James C. Paulson

3004 IFN-γ Regulates Donor CD8 T Cell Expansion, Migration, and Leads to Apoptosis of Cells of a Solid Tumor
Joseph A. Hollenbaugh and Richard W. Dutton

3012 T Cell Conditioning Explains Early Disappearance of the Memory CD8 T Cell Response to Infection
Ali Jabbari, Kevin L. Legge, and John T. Harty

3019 Human Macrophages Constitute Targets for Immunotoxic Inorganic Arsenic
Anthony Lemarie, Claudie Morzadec, Emilie Bourdonnay, Olivier Bourdonnay, Olivier Fardel, and Laurent Vernhet

3028 Simvastatin Treatment Ameliorates Autoimmune Disease Associated with Accelerated Atherosclerosis in a Murine Lupus Model
Tamar Aprahamian, Ramon Bonegio, Jennifer Rizzo, Harris Perlman, David J. Lefer, Ian R. Rifkin, and Kenneth Walsh

3035 Increased B Cell Survival and Preferential Activation of the Memory Compartment by a Malaria Polyclonal B Cell Activator
Daria Donati, Bobo Mok, Arnaud Chéne, Hong Xu, Mathula Thangarajh, Rickard Glas, Qijun Chen, Mats Wahlgren, and Maria Teresa Bejarano

3045 A Second Generation of Double Mutant Cholera Toxin Adjuvants: Enhanced Immunity without Intracellular Trafficking
Yukari Hagiwara, Yuki I. Kawamura, Kosuke Kataoka, Bibi Rahima, Raymond J. Jackson, Katsuhiro Komase, Taeko Dohi, Prosper N. Boyaka, Yoshifumi Takeda, Hiroshi Kiyono, Jerry R. McGhee, and Kohtaro Fujihashi

3055 CD4 T Cell-Dependent Autoimmunity against a Melanocyte Neoantigen Induces Spontaneous Vitiligo and Depends upon Fas-Fas Ligand Interactions
Teresa Lambe, Jason C. H. Leung, Tiphaine Bouriez-Jones, Karlee Silver, Kimmo Mäkinen, Tanya L. Crockford, Helen Ferry, John V. Forrester, and Richard J. Cornall
CD22 Ligand Binding Regulates Normal and Malignant B Lymphocyte Survival In Vivo

Neonatal and Adult CD4+CD3− Cells Share Similar Gene Expression Profile, and Neonatal Cells Up-Regulate OX40 Ligand in Response to TL1A (TNFSF15)
Mi-Yeon Kim, Kai-Michael Toellner, Andrea White, Fiona M. McConnell, Fabrina M. C. Gaspal, Sonia M. Parnell, Eric Jenkinson, Graham Anderson, and Peter J. L. Lane

Membrane-Associated TGF-β1 Inhibits Human Memory T Cell Signaling in Malignant and Nonmalignant Inflammatory Microenvironments
Lori Bruederick and Richard B. Bankert

Early Immunization Induces Persistent Tumor-Infiltrating CD8+ T Cells against an Immunodominant Epitope and Promotes Lifelong Control of Pancreatic Tumor Progression in SV40 Tumor Antigen Transgenic Mice
Pavel Otahal, Todd D. Schell, Sandra C. Hutchinson, Barbara B. Knowles, and Satvir S. Tevethia

Expression and Release of HLA-E by Melanoma Cells and Melanocytes: Potential Impact on the Response of Cytotoxic Effector Cells
Laurent Derrr, Murielle Corvaisier, Béatrice Charreau, Anne Moreau, Emmanuelle Godefroy, Agnès Moreau-Aubry, Francine Jotereau, and Nadine Gervois

Molecular and Structural Immunology

MHC Class I-Like MILL Molecules Are β2-Microglobulin-Associated, GPI-Anchored Glycoproteins That Do Not Require TAP for Cell Surface Expression
Mizuho Kajikawa, Tomohisa Baba, Utano Tomaru, Yutaka Watanabe, Satoru Koganei, Sachiro Tsuji-Kawabara, Naoki Matsumoto, Kazuo Yamamoto, Masaki Miyazawa, Katsumi Maenaka, Akihiro Ishizu, and Masanori Kasahara

Structural Basis for the Interaction of CCR5 with a Small Molecule, Functionally Selective CCR5 Agonist
Yuji Saita, Eiichi Kodama, Masaya Orita, Mitsuhiko Kondo, Takahiro Miyazaki, Kenji Sudo, Keiko Kajiwara, Masao Matsuoka, and Yasuaki Shimizu

Mutational Analysis of the Mechanism of Negative Regulation by Src Homology 2 Domain-Containing Protein Tyrosine Phosphatase Substrate-1 of Phagocytosis in Macrophages
Hiroshi Ikeda, Hideki Okazawa, Hiroshi Ohnishi, Yoji Murata, Per-Arne Oldenborg, and Takashi Matozaki

Analysis of FOXP3 Reveals Multiple Domains Required for Its Function as a Transcriptional Repressor

Human Cytomegalovirus-Encoded UL16 Discriminates MIC Molecules by Their α2 Domains
Jessica Spreu, Thilo Stehle, and Alexander Steinle

HLA-B44 Polymorphisms at Position 116 of the Heavy Chain Influence TAP Complex Binding via an Effect on Peptide Occupancy
Vilasak Thanmavongsa, Gayatri Raghuraman, Tracy M. Filzen, Kathleen L. Collins, and Malini Raghavan

Not Lipoteichoic Acid but Lipoproteins Appear to Be the Dominant Immunobiologically Active Compounds in Staphylococcus aureus
Masahito Hashimoto, Kazuki Tawaratsumida, Hiroyuki Kariya, Ai Kiyohara, Yasuo Suda, Fumiko Kikae, Teruo Kikihar, and Friedrich Götz

Molecular Analysis of NTB-A Signaling: A Role for EAT-2 in NTB-A-Mediated Activation of Human NK Cells
Philipp Eissmann and Carsten Watzl

Immunogenetics

Murine Vβ3+ and Vβ7+ T Cell Subsets Are Specific Targets for the HERV-K18 Env Superantigen
Albert K. Tai, Miao Lin, Francesca Chang, Gang Chen, Francis Hsiao, Natalie Sutkowski, and Brigitte T. Huber
HOST DEFENSE

3185 Dengue Virus Induces Expression of CXC Chemokine Ligand 10/IFN-γ-Inducible Protein 10, Which Competitively Inhibits Viral Binding to Cell Surface Heparan Sulfate

3193 Type I IFNs Stimulate Nitric Oxide Production and Resistance to Trypanosoma cruzi Infection
Vladia M. A. Costa, Karen C. L. Torres, Ronaldo Z. Mendonça, Ion Gresser, Kenneth J. Gallop, and Ises A. Abrahamsohn

3201 Leukotrienes Are Essential for the Control of Leishmania amazonensis Infection and Contribute to Strain Variation in Susceptibility
Carlos H. Serezani, João H. Perrela, Momtchilo Russo, Marc Peters-Golden, and Sonia Jancar

3209 CD40/CD154 Interactions Are Required for the Optimal Maturation of Skin-Derived APCs and the Induction of Helminth-Specific IFN-γ but Not IL-4
James P. Hewitson, Gavin R. Jenkins, Paul A. Hamblin, and Adrian P. Mountford

3218 IL-12, but Not IL-18, Is Critical to Neutrophil Activation and Resistance to Polymicrobial Sepsis Induced by Cecal Ligation and Puncture
Susana E. Moreno, José C. Alves-Filho, Thaís M. Alfaia, João S. da Silva, Sergio H. Ferreira, and Foo Y. Liew

3225 Coordinated Function of Murine Cytomegalovirus Genes Completely Inhibits CTL Lysis
Amelia K. Pinto, Michael W. Munki, Ulrich H. Koszinowski, and Ann B. Hill

3235 Activation and Regulation of Platelet-Activating Factor Receptor: Role of G1 and Gq in Receptor-Mediated Chemotactic, Cytotoxic, and Cross-Regulatory Signals
Stephan L. Brown, Venkatakrishna R. Jala, Sandeep K. Raghuvanshi, Mohd W. Naser, Bodulului Haribabu, and Ricardo M. Richardson

3242 Processing and Presentation of a Mycobacterial Antigen 85B Epitope by Murine Macrophages Is Dependent on the Phagosomal Acquisition of Vacuolar Proton ATPase and In Situ Activation of Cathepsin D
Christopher R. Singh, Rachel A. Moulton, Lisa Y. Armitige, Akhil Bidani, Mark Snuggs, Subramanian Dhandayuthapani, Robert L. Hunter, and Chinnaswamy Jagannath

3250 Bone Marrow Stromal Cell Antigen 2 Is a Specific Marker of Type I IFN-Producing Cells in the Naive Mouse, but a Promiscuous Cell Surface Antigen following IFN Stimulation
Amanda L. Blasius, Emanuele Giurisato, Marina Cella, Robert D. Schreiber, Andrew S. Shaw, and Marco Colonna

3260 EBV Can Protect Latently Infected B Cell Lymphomas from Death Receptor-Induced Apoptosis
Andrew L. Snow, Statie L. Lambert, Yasodha Natkunam, Carlos O. Esquivel, Sheri M. Krams, and Olivia M. Martinez

3266 Protective Roles of Mast Cells and Mast Cell-Derived TNF in Murine Malaria
Takahisa Furuta, Takane Kikuchi, Yoichiro Iwakura, and Naohiro Watanabe

3273 Characterization of the Histoplasma capsulatum-Induced Granuloma
Erika Heninger, Laura H. Hogan, Jozsef Karman, Sinarack Macvilay, Bjork Hill, Jon P. Woods, and Matyas Sandor

INFLAMMATION

3314 Immune Interactions with CD4+ T Cells Promote the Development of Functional Osteoclasts from Murine CD11c+ Dendritic Cells
Mawadda Alnæeli, Josef M. Penninger, and Yen-Tung Andy Teng
Specific Contribution of p19ARF to Nitric Oxide-Dependent Apoptosis
Miriam Zeini, Paqui G. Través, Raquel López-Fontal, Cristina Pantoja, Ander Matheu, Manuel Serrano, Lisardo Bosca, and Sonsoles Horrelano

The Role of IFN-α and Nitric Oxide in the Release of HMGB1 by RAW 264.7 Cells Stimulated with Polynosinic-Polyctydylid Acid or Lipopolysaccharide
Wei Ren Jiang and David S. Pietsky

Functional Analysis of the Chemokine Receptor CCR3 on Airway Epithelial Cells
Lisa A. Beck, Brian Tancowny, Mary E. Brommet, S. Yukiko Asaki, Stephanie L. Curry, Margaret B. Penno, Martyn Foster, Ashbah, and Cristiana Stellato

Corticotropin-Releasing Hormone Receptor 2-Deficient Mice Have Reduced Intestinal Inflammatory Responses
Efi Kokkotou, Daniel Torres, Alan C. Mos, Michael O’Brien, Dimitri E. Grigoriadis, Katia Karalis, and Charalabos Pothoulakis

Active Participation of Antigen-Nonspecific Lymphoid Cells in Immune-Mediated Inflammation
Jun Chen, Chiaki Fujimoto, Barbara P. Vistica, Eric F. Wauwrosek, Brian Kelsall, and Igal Gery

Functional Analysis of the Chemokine Receptor CCR3 on Airway Epithelial Cells
Lisa A. Beck, Brian Tancowny, Mary E. Brommet, S. Yukiko Asaki, Stephanie L. Curry, Margaret B. Penno, Martyn Foster, Ashbah, and Cristiana Stellato

Synchrony of High Endothelial Venules and Lymphatic Vessels Revealed by Immunization
Shan Liao and Nancy H. Ruddle

Phenotypic and Functional Characterization of Kidney-Infiltrating Lymphocytes in Renal Ischemia Reperfusion Injury
Dolores B. Ascon, Sergio Lopez-Briones, Manchung Liu, Miguel Ascon, Vladimir Savransky, Robert B. Colvin, Mark J. Salosi, and Hamid Rabb

Targeted Deletion of CCR2 Impairs Deep Vein Thrombosis Resolution in a Mouse Model
Peter K. Henke, Charles G. Pearce, Daria M. Moaveni, Andrea J. Moore, Erin M. Lynch, Christopher Longo, Manu Varma, Nicholaus D. Dwyer, K. Barry Deatrick, Gilbert R. Upchurch, Jr., Thomas W. Wakefield, Cory Hogaboam, and Steven L. Kunkel

Role of FcRs In Animal Model of Autoimmune Bullous Pemphigoid
Minglang Zhao, Mary E. Trimberger, Ning Li, Luis A. Diaz, Steven D. Shapiro, and Zhi Liu

CD100 Enhances Dendritic Cell and CD4+ Cell Activation Leading to Pathogenetic Humoral Responses and Immune Complex Glomerulonephritis
Ming Li, Kim M. O’Sullivan, Lynelle K. Jones, Timothy Semple, Atsushi Kumanogoh, Hitoshi Kikutani, Stephen R. Holdsworth, and A. Richard Kitching

Role of MAPK in the Regulation of Double-Stranded RNA- and Encephalomyocarditis Virus-Induced Cyclooxygenase-2 Expression by Macrophages
Sarah A. Steer, Jason M. Moran, Benjamin S. Christmann, Leonard B. Maggi, Jr., and John A. Corbett

Stat5 Expression Is Required for IgE-Mediated Mast Cell Function
Brian O. Barnstein, Geqiang Li, Zhengqi Wang, Sarah Kennedy, Charles Chalfant, Hiroshi Nakajima, Kevin D. Bunting, and John J. Ryan

c-Src Mediates Thrombin-Induced NF-κB Activation and IL-8/CXCL8 Expression in Lung Epithelial Cells
Chien-Huang Lin, Hui-Wen Cheng, Ming-Jen Hsu, Mei-Chieh Chen, Chia-Chin Lin, and Bing-Chang Chen

Leukotriene B4 Receptors BLT1 and BLT2: Expression and Function in Human and Murine Mast Cells
Katherine A. Lundeen, Binggang Sun, Lars Karlson, and Anne M. Fourie

CLINICAL IMMUNOLOGY

Cooperative Induction of a Tolerogenic Dendritic Cell Phenotype by Cytokines Secreted by Pancreatic Carcinoma Cells
Graziella Bellone, Anna Carbone, Carlo Smirne, Tiziana Scirelli, Alessandra Buffolino, Anna Novarino, Alessandra Stacchini, Oscar Bertetto, Giorgio Palestro, Claudio Sorio, Aldo Scarpa, Giorgio Emanuelli, and Ulrich Rodeck
Induction of Complement-Fixing Autoantibodies against Type VII Collagen Results in Subepidermal Blistering in Mice
Cassian Sitaru, Mircea T. Chiriac, Sidonia Mihai, Jürgen Büning, Andreas Gebert, Akira Ishiko, and Detlef Zillikens

Factor I-Mediated Processing of Complement Fragments on HIV Immune Complexes Targets HIV to CR2-Expressing B Cells and Facilitates B Cell-Mediated Transmission of Opsonized HIV to T Cells
Zoltán Bánki, Doris Wilflingseder, Christoph G. Ammann, Monika Pruenster, Brigitte Müllauer, Karoline Holländer, Martina Meyer, Georg M. Springer, Jan van Lunzen, Hans-jürgen Stellbrink, Manfred P. Dierich, and Heribert Stoiber

Phase II Enzymes Induction Blocks the Enhanced IgE Production in B Cells by Diesel Exhaust Particles
Junxiang Wan and David Diaz-Sanchez

Evaluation of the Function of Human Invariant NKT Cells from Cancer Patients Using α-Galactosylceramide-Loaded Murine Dendritic Cells
Kanako Shimizu, Michihiro Hidaka, Norimitsu Kadowaki, Noriko Makita, Naoko Konishi, Koji Fujimoto, Takashi Uchiyama, Fumio Kawano, Masaru Taniguchi, and Shin-ichiro Fujii

Corrections

Author Index

AAI Membership Application

AAI Trainee Membership Application