IN THIS ISSUE

PILLARS OF IMMUNOLOGY

4389 Life before Seventeen: Cloning of the IL-17 Receptor
Sarah L. Gaffen

4392 Pillars Article: Herpesvirus Saimiri Encodes a New Cytokine, IL-17, which Binds to a Novel Cytokine Receptor. Immunity. 1995. 3: 811–821
Zhengbin Yao, William C. Fanslow, Michael F. Seldin, Anne-Marie Rousseau, Sally L. Painter, Michael R. Comeau, Jeffrey I. Cohen, and Melanie K. Spriggs

BRIEF REVIEWS

4403 Tumor Stress Inside Out: Cell-Extrinsic Effects of the Unfolded Protein Response in Tumor Cells Modulate the Immunological Landscape of the Tumor Microenvironment
Navin R. Mahadevan and Maurizio Zanetti

CUTTING EDGE

4411 Cutting Edge: Expression of XCR1 Defines Mouse Lymphoid-Tissue Resident and Migratory Dendritic Cells of the CD8α+ Type
Karine Crozat, Samira Tamoutounour, Thien-Phong Vu Manh, Even Fossum, Hervé Luche, Laurence Ardouin, Martin Guilliams, Hiroaki Azukizawa, Bjarne Bogen, Bernard Malissen, Sandrine Henri, and Marc Dalod

4416 Cutting Edge: Regulatory T Cells Do Not Mediate Suppression via Programmed Cell Death Pathways
Andrea L. Szmyczak-Workman, Greg M. Delgoffe, Douglas R. Green, and Dario A. A. Vignali

4421 Cutting Edge: CD40–CD40 Ligand Pathway Plays a Critical CD8-Intrinsic and -Extrinsic Role during Rescue of Exhausted CD8 T Cells
Rajarshi Bhadra, Jason P. Gigley, and Imtiaz A. Khan

4426 Cutting Edge: IRF8 Regulates Bax Transcription In Vivo in Primary Myeloid Cells
Jine Yang, Xiaolin Hu, Mary Zimmerman, Christina M. Torres, Dafeng Yang, Syléa B. Smith, and Kebin Liu

On the cover: Section of a spleen from a compound knockout mouse lacking expression of both EBI2 and CXCR5. The central location of T cells (blue) in the white pulp remains unaffected, but follicular (green) and marginal zone (red) B cells no longer segregate and are intermingled. Brink, D., K. Wood, and R. Brink. 2011. EBI2 operates independently of but in cooperation with CXCR5 and CCR7 to direct B cell migration and organization in follicles and the germinal center. J. Immunol. 187: 4621–4628.
Elevated Tumor-Associated Antigen Expression Suppresses Variant Peptide Vaccine Responses
Charles B. Kemmler, Eric T. Clambey, Ross M. Kedl, and Jill E. Slansky

Sensitivity and Resistance to Regulation by IL-4 during Th17 Maturation
Laura A. Cooney, Keara Towery, Judith Endres, and David A. Fox

Pathogenic Autoreactive B Cells Are Not Negatively Selected toward Matrix Protein Collagen II
Duogia Cao, la Khamaladze, Hongwei Jia, Estelle Bajtner, Kathy S. Nandakumar, Thomas Blom, John A. Mo, and Rikard Holmdahl

The SLP-76 Src Homology 2 Domain Is Required for T Cell Development and Activation
Jeremy C. Burns, Evann Corbo, Janine Degen, Mercy Gohl, Christine Anterasian, Burkart Schraven, Gary A. Koretzky, Stefanie Kliche, and Martha S. Jordan

Critical Roles of RasGRP1 for Invariant NKT Cell Development
Shudan Shen, Yong Chen, Balachandra K. Gorentla, Jianxin Lu, James C. Stone, and Xiao-Ping Zhong

Modeling of Influenza-Specific CD8⁺ T Cells during the Primary Response Indicates that the Spleen Is a Major Source of Effectors
Hulin Wu, Arun Kumar, Hongyu Mao, Jeanne Holden-Wilson, Timothy R. Moormann, Alexandra M. Livingstone, Gabrielle T. Belz, Alan S. Perelson, Martin S. Zand, and David J. Topham

The NF-κB Transcription Factor c-Rel Is Required for Th17 Effector Cell Development in Experimental Autoimmune Encephalomyelitis
Guobing Chen, Kristine Hardy, Eloisa Pagler, Lina Ma, Seungsoo Lee, Steve Gerondakis, Stephen Daley, and M. Frances Shannon

MHC-Independent Genetic Factors Control the Magnitude of CD4⁺ T Cell Responses to Amyloid-β Peptide in Mice through Regulatory T Cell-Mediated Inhibition
Cécile Toly-Ndour, Gabrielle Lui, Maria Manuel Nunes, Martine Bruley-Rosset, Pierre Aucouturier, and Guillaume Dorethée

DHX9 Pairs with IPS-1 To Sense Double-Stranded RNA in Myeloid Dendritic Cells
Zhiqiang Zhang, Bin Yuan, Ning Lu, Valeria Facchinetti, and Yong-Jun Liu

Acid Sphingomyelinase Is Required for Protection of Effector Memory T Cells against Glucocorticoid-Induced Cell Death
Denise Tischner, Jennifer Theis, Anna Karabinskaya, Jens van den Brands, Sybille D. Reichardt, Ulrike Karow, Marco J. Herold, Fred Lübber, Olaf Utermöhlen, and Holger M. Reichardt

Sirtuin 1 Promotes Th2 Responses and Airway Allergy by Repressing Peroxisome Proliferator-Activated Receptor-γ Activity in Dendritic Cells
Agnieszka Legutko, Thomas Marichal, Laurence Fiévez, Denis Bedoret, Alice Mayer, Hilda de Vries, Luisa Klotz, Pierre-Vincent Drion, Carlo Heirman, Denis Bedoret, Renaud Louis, Kris Thielemann, Fabienne Andris, Oberdan Leo, Pierre Lekeux, Christophe J. Desmet, and Fabrice Bureau

The Link between the PDL1 Costimulatory Pathway and Th17 in Fetomaternal Tolerance
Francesca D’Addio, Leonardo V. Riella, Bechara G. Mfarrej, Lola Chabtini, La Tonya Adams, Melissa Yeung, Hideo Yagita, Miuuki Azuma, Mohamed H. Sayegh, and Indira Guleria

Prenatal Secondhand Cigarette Smoke Promotes Th2 Polarization and Impairs Goblet Cell Differentiation and Airway Mucus Formation
Shashi P. Singh, Sravanthi Gundavarapu, Juan C. Peña-Philippides, Jules Rir-sima-ah, Neerad C. Mishra, Julie A. Wilder, Raymond J. Langley, Kevin R. Smith, and Mohan L. Sopori

Regulation of the Germinal Center Reaction by Foxp3⁺ Follicular Regulatory T Cells
Ivonne Wollenberg, Ana Agua-Doce, Andrea Hernández, Catarina Almeida, Vanessa G. Oliveira, Jose Faro, and Luis Graca
Restricted Aeroallergen Access to Airway Mucosal Dendritic Cells In Vivo Limits Allergen-Specific CD4⁺ T Cell Proliferation during the Induction of Inhalation Tolerance

Reciprocal Polarization of T and B Cells at the Immunological Synapse
Sophie Duchez, Magda Rodrigues, Florie Bertrand, and Salvatore Valitutti

The Magnitude of the T Cell Response to a Clinically Significant Dose of Influenza Virus Is Regulated by TRAIL
Erik L. Brincks, Prajwal Gurung, Ryan A. Langlois, Emily A. Hemann, Kevin L. Legge, and Thomas S. Griffith

Contributions of Direct and Indirect Alloresponses to Chronic Rejection of Kidney Allografts in Nonhuman Primates

IL-33 Expands Suppressive CD11b⁺ Gr-1int and Regulatory T Cells, including ST2L⁺ Foxp3⁺ Cells, and Mediates Regulatory T Cell-Dependent Promotion of Cardiac Allograft Survival
Heth R. Tarnquist, Zhenlin Zhao, Brian R. Rosborough, Quan Liu, Antonino Castellaneta, Kumiko Isse, Zhiliang Wang, Megan Lang, Donna Beer Stolz, Xin Xiao Zheng, A. Jake Demetrinis, Foo Y. Liew, Kathryn J. Wood, and Angus W. Thomson

Pyridone 6, a Pan-JAK Inhibitor, Ameliorates Allergic Skin Inflammation of NC/Nga Mice via Suppression of Th2 and Enhancement of Th17
Ryuuke Nakagawa, Hideyuki Yoshida, Mayako Asakawa, Taiga Tamiya, Naoko Inoue, Rimpel Morita, Hiromasa Inoue, Atsuhito Nakao, and Akihiko Yoshihara

EBI2 Operates Independently of but in Cooperation with CXCR5 and CCR7 To Direct B Cell Migration and Organization in Follicles and the Germinal Center
Dominique Gatto, Katherine Wood, and Robert Brink

Blockade of Notch Ligand Delta1 Promotes Allograft Survival by Inhibiting Alloreactive Th1 Cells and Cytotoxic T Cell Generation
Leonardo V. Riella, Takuya Ueno, Ibrahim Batal, Sacha A. De Serres, Ribal Bassil, Wasiim Elaman, Hideo Yagita, José O. Medina-Pestana, Anil Chandraker, and Nader Najafian

Elf3 Regulates Allergic Airway Inflammation by Controlling Dendritic Cell-Driven T Cell Differentiation
Rahul Kushwah, Jordan R. Oliver, Jing Wu, Zhijie Chang, and Jim Hu

Segregated Regulatory CD39⁺CD4⁺ T Cell Function: TGF-β-Producing Foxp3⁻ and IL-10-Producing Foxp3⁺ Cells Are Interdependent for Protection against Collagen-Induced Arthritis
Irina Kochetkova, Theresa Thornburg, Gayle Callis, and David W. Pascual

Interaction of Ras with P110α Is Required for Thymic β-Selection in the Mouse
Michelle L. Janas and Martin Turner

HIV-1 N-Glycan Composition Governs a Balance between Dendritic Cell-Mediated Viral Transmission and Antigen Presentation
Thijs van Montfort, Dirk Eggink, Maikel Boot, Michael Tuen, Catarina E. Hioe, Ben Berkhout, and Rogier W. Sanders

Intracellular HMGB1 Negatively Regulates Efferocytosis
Sami Banerjee, Andressa de Freitas, Arnaud Friggeri, Jaroslaw W. Zmijewski, Gang Liu, and Edward Abraham

MHC Class I Family Proteins Retard Systemic Lupus Erythematosus Autoimmunity and B Cell Lymphomagenesis
Caroline G. McPhee, Thomas J. Spronle, Dong-Mi Shin, Jason A. Bubier, William H. Schott, Martin P. Steinbuck, Lia Aveneyan, Herbert C. Morse, III, and Derry C. Roopenian
MOLECULAR AND STRUCTURAL IMMUNOLOGY

4705 NKT TCR Recognition of CD1d-α-C-Galactosylceramide

4714 Mechanism for Pre-B Cell Loss in V_{\gamma}R-Mutant Rabbits
Gregory R. Robbins and Katherine L. Knight

4721 Protein Kinase C\(\epsilon\) Regulates Proliferation and Cell Sensitivity to TGF-1\(\beta\) of CD4+ T Lymphocytes: Implications for Hashimoto Thyroiditis
Prisco Miranda, Giuliana Gabbi, Elena Masselli, Cristina Micheloni, Daniela Di Marcantonio, Valeria Queirolo, Paolo Chiorda, Tiziana Meschi, and Marco Vitale

4733 Enhancement of Antibody Class-Switch Recombination by the Cumulative Activity of Four Separate Elements
Weley A. Dunnick, Jian Shi, Jennifer M. Zerbato, Clinton A. Fontaine, and John T. Collins

HOST DEFENSE

4744 Mycobacterial Secretion Systems ESX-1 and ESX-5 Play Distinct Roles in Host Cell Death and Inflammation Activation
Abdalllah M. Abdalllah, Jostanka Bestebroer, Nigel D. L. Savage, Karin de Punder, Maaikje van Zon, Louis Wilson, Cees J. Korbee, Astrid M. van der Sar, Tom H. M. Ottenhoff, Nicole N. van der Wel, Wilbert Bitter, and Peter J. Peters

4754 Tripartite Motif-Containing Protein 28 Is a Small Ubiquitin-Related Modifier E3 Ligase and Negative Regulator of IFN Regulatory Factor 7
Qiming Liang, Hongying Deng, Xiaojian Li, Xianfang Wu, Qiyi Tang, Tsung-Hsien Chang, Hongzhua Peng, Frank J. Raucher, III, Keiko Ozato, and Fanxiu Zhu

4764 Heligmosomoides polygyrus Elicits a Dominant Nonprotective Antibody Response Directed against Restricted Glycan and Peptide Epitopes
James P. Hewitson, Kara J. Filbey, John R. Grainger, Adam A. Doule, Mark Pearson, Janice Murray, Yvonne Harcus, and Rick M. Maizels

INFLAMMATION

4778 Hydrogen Sulfide Upregulates Cyclooxygenase-2 and Prostaglandin E Metabolite in Sepsis-Evoked Acute Lung Injury via Transient Receptor Potential Vanilloid Type 1 Channel Activation
Seah-Fang Ang, Selena W. S. Sio, Shabbir M. Moochhala, Paul A. MacAry, and Madhav Bhatia

4788 Neuroinflammation and Endoplasmic Reticulum Stress Are Coregulated by Crocin To Prevent Demyelination and Neur degeneration

4800 Ozone Inhalation Promotes CX3CR1-Dependent Maturation of Resident Lung Macrophages That Limit Oxidative Stress and Inflammation
Robert M. Tighe, Zhuowei Li, Erin N. Potts, Sarah Frush, Ningshan Liu, Michael D. Gunn, W. Michael Foster, Paul W. Noble, and John W. Hollingworth

4809 Hemorrhagic Shock Activation of NLRP3 Inflammasome in Lung Endothelial Cells
Meng Xiang, Xiaolian Shi, Yuehua Li, Jia Xu, Lianhua Yin, Guozhi Xiao, Melanie J. Scott, Timothy R. Billiar, Mark A. Wilson, and Jie Fan

4818 Role of IL-17A in Neutrophil Recruitment and Hepatic Injury after Warm Ischemia–Reperfusion Mice
Hiroshi Kono, Hideki Fujii, Masahito Ogiku, Naoshiro Hoomura, Hitotake Amemiya, Maato Tsuchiya, and Michio Hara

4826 Prmt2 Regulates the Lipopolysaccharide-Induced Responses in Lungs and Macrophages
Emilie Dalloneau, Patricia Lopes Pereira, Véronique Brault, Elizabeth G. Nabel, and Yann Héralt
4835 IL-1α and IL-1β Recruit Different Myeloid Cells and Promote Different Stages of Sterile Inflammation
Peleg Rider, Yaron Carmi, Ofer Gutman, Alex Bratman, Idan Cohen, Elena Voronov, Malka R. White, Charles A. Dinarello, and Ron N. Apte

4844 Hepatitis B Virus Induces a Novel Inflammation Network Involving Three Inflammatory Factors, IL-29, IL-8, and Cyclooxygenase-2
Yi Yu, Rui Gong, Yongxin Mu, Yanni Chen, Chengliang Zhu, Zhichen Sun, Mingzhou Chen, Yingle Liu, Ying Zhu, and Jianguo Wu

4861 Granule-Derived Granzyme B Mediates the Vulnerability of Human Neurons to T Cell-Induced Neurotoxicity
Yohannes Haile, Katia Carmine Simmen, Dion Pasichnyk, Nicolas Touret, Thomas Simmen, Jian-Qiang Lu, R. Chris Bleackley, and Fabrizio Giuliani

4873 IL-13 Receptor α1 Differentially Regulates Aeroallergen-Induced Lung Responses
Marc E. Rothenberg, Ting Wen, Dana Shik, Eric T. Cole, Melissa M. Mingler, and Ariel Munitz

4881 CMRF-35–Like Molecule 3 Preferentially Promotes TLR9-Triggered Proinflammatory Cytokine Production in Macrophages by Enhancing TNF Receptor-Associated Factor 6 Ubiquitination
Yanan Wu, Xuhui Zhu, Nan Li, Taoyong Chen, Mingjin Yang, Ming Yao, Xingguang Liu, Boquan Jin, Xiaobo Wang, and Xueqin Cao

4890 Critical Roles of ASC Inflammasomes in Caspase-1 Activation and Host Innate Resistance to Streptococcus pneumoniae Infection
Rendong Fang, Kohsuke Tsuchiya, Ikuo Kawamura, Yanna Shen, Hideki Hara, Shunsuke Sakai, Takeshi Yamamoto, Teresa Fernandez-Alencar, Rauli Yang, Eduardo Hernandez-Cuellar, Sita R. Dewamitta, Yanting Xu, Huixin Qu, Emaid S. Alemi, and Masao Mitsuyama

4900 B Cell Depletion Enhances T Regulatory Cell Activity Essential in the Suppression of Arthritis
Keith M. Hamel, Yanxia Cao, Susan Ashaye, Yumei Wang, Robert Dunn, Marilyn R. Kehry, Tibor T. Glant, and Alison Finnegan

4907 Invariant NKT Cell Defects in Vitamin D Receptor Knockout Mice Prevents Experimental Lung Inflammation
Sanhong Yu, Jun Zhao, and Margherita T. Cantorna

4913 Ornithodoros moubata Complement Inhibitor Is an Equally Effective C5 Inhibitor in Pigs and Humans
Andreas Barratt-Due, Ebbe Billmann Thorgersen, Julie Katrine Lindstad, Anne Pharø, Olga Lissina, John D. Lambris, Miles A. Nunn, and Tom Eirik Mollnes

CORRECTIONS

4920 Correction: p53 Represses Class Switch Recombination to IgG2a through Its Antioxidant Function
Jeroen E. J. Guikema, Carol E. Schrader, Michael H. Brodsky, Erin K. Linehan, Adam Richards, Nahla El Falaky, Daniel H. Li, Hayla K. Sluss, Eva Szomolanyi-Tuda, and Janet Stavnezer

4921 AUTHOR INDEX