



3013 IN THIS ISSUE

PILLARS OF IMMUNOLOGY

- 3015 TCR Transgenic Mice That Shed Light on Immune and Environmental Regulators in Multiple Sclerosis
Kathrine E. Attfield and Lars Fugger
- 3018 Pillars Article: Transgenic Mice that Express a Myelin Basic Protein-Specific T Cell Receptor Develop Spontaneous Autoimmunity. *Cell*. 1993. 72: 551–560
Joan Goverman, Andrea Woods, Lisa Larson, Leslie P. Weiner, Leroy Hood, and Dennis M. Zaller
- 3028 Pillars Article: High Incidence of Spontaneous Autoimmune Encephalomyelitis in Immunodeficient Anti-Myelin Basic Protein T Cell Receptor Transgenic Mice. *Cell*. 1994. 78: 399–408
Juan J. Lafaille, Kumiko Nagashima, Motoya Katsuki, and Susumu Tonegawa

BRIEF REVIEWS

- 3039 Young Lives Lost as B Cells Falter: What We Are Learning About Antibody Responses in Malaria
Silvia Portugal, Susan K. Pierce, and Peter D. Crompton

CUTTING EDGE

- 3049 Cutting Edge: STAT1 Is Required for IL-6–Mediated Bcl6 Induction for Early Follicular Helper Cell Differentiation
Youn Soo Choi, Danelle Eto, Jessica A. Yang, Christopher Lao, and Shane Crotty
- 3054 Cutting Edge: Leptin-Induced ROR γ t Expression in CD4⁺ T Cells Promotes Th17 Responses in Systemic Lupus Erythematosus
Yiyun Yu, Yaoyang Liu, Fu-Dong Shi, Hejian Zou, Giuseppe Matarese, and Antonio La Cava

On the cover: Histological architecture of Peyer's patch at postnatal day 7. Ag-independent process of Peyer's patches organogenesis completes around P7, resulting in a more complex organ with distinct zonings. Green, CXCL12⁺ T cell zone; red, CXCL13⁺ B cell zone; blue, MadCAM⁺ high endothelial venule. Nakagawa, R., A. Togawa, T. Nagasawa, and S.-i. Nishikawa. 2013. Peyer's patch inducer cells play a leading role in the formation of B and T cell zone architecture. *J. Immunol.* 190: 3309–3318.

The Journal of Immunology (ISSN 0022-1767) is published twice each month by The American Association of Immunologists, Inc., 9650 Rockville Pike, Bethesda, MD 20814-3994, Phone: 301-634-7197, Fax: 301-634-7829. Subscription terms: New subscriptions and renewals begin January 1 and expire one year later (see <http://www.jimmunol.org/subscriptions> for prices and details). A special rate is available to members of The American Association of Immunologists, Inc. (see <http://www.aai.org/membership>). The American Association of Immunologists, Inc., is not responsible for undeliverable issues. Replacement issues can be obtained, if available, at the regular price of single issues (see http://www.jimmunol.org/pdf/single_issue_purchase.pdf). Reprints of individual articles are available only from authors. Periodicals postage paid at Bethesda, MD 20814-3994, and at additional mailing offices. Country of origin U.S.A. Printed on acid-free recyclable paper. Postmaster: Send address changes 60 days in advance to *The Journal of Immunology*, Subscription Department, 9650 Rockville Pike, Bethesda, MD 20814-3994. Copyright © 2013 by The American Association of Immunologists, Inc.

ALLERGY AND OTHER HYPERSENSITIVITIES

- 3059 Identification of Der p 23, a Peritrophin-like Protein, as a New Major *Dermatophagoides pteronyssinus* Allergen Associated with the Peritrophic Matrix of Mite Fecal Pellets
Margit Weghofer, Monika Grote, Yvonne Resch, Anne Casset, Michael Kneidinger, Jolanta Kopec, Wayne R. Thomas, Enrique Fernández-Caldas, Michael Kabesch, Rosetta Ferrara, Adriano Mari, Ashok Purohit, Gabrielle Pauli, Friedrich Horak, Walter Keller, Peter Valent, Rudolf Valenta, and Susanne Vrtala
- 3068 A Nonallergenic Birch Pollen Allergy Vaccine Consisting of Hepatitis PreS–Fused Bet v 1 Peptides Focuses Blocking IgG toward IgE Epitopes and Shifts Immune Responses to a Tolerogenic and Th1 Phenotype
Katharina Marth, Isabella Breyer, Margarete Focke-Tejkl, Katharina Blatt, Mohamed H. Shamji, Janice Layhadi, Anna Gieras, Ines Swoboda, Domen Zafred, Walter Keller, Peter Valent, Stephen R. Durham, and Rudolf Valenta

ANTIGEN RECOGNITION AND RESPONSES

- 3079 TCR-Driven Transendothelial Migration of Human Effector Memory CD4 T Cells Involves Vav, Rac, and Myosin IIA
Thomas D. Manes and Jordan S. Pober
- 3089 Differential Polarization of C-Terminal Src Kinase between Naïve and Antigen-Experienced CD8⁺ T Cells
Jessica G. Borger, Andrew Filby, and Rose Zamojska
- 3100 Primate B-1 Cells Generate Antigen-Specific B Cell Responses to T Cell–Independent Type 2 Antigens
Rama D. Yammani and Karen M. Haas

AUTOIMMUNITY

- 3109 Genetic Interactions among *Idd3*, *Idd5.1*, *Idd5.2*, and *Idd5.3* Protective Loci in the Nonobese Diabetic Mouse Model of Type 1 Diabetes
Xiaotian Lin, Emma E. Hamilton-Williams, Daniel B. Rainbow, Kara M. Hunter, Yang D. Dai, Jocelyn Cheung, Laurence B. Peterson, Linda S. Wicker, and Linda A. Sherman
- 3121 Expression of CXCR3 on Specific T Cells Is Essential for Homing to the Prostate Gland in an Experimental Model of Chronic Prostatitis/Chronic Pelvic Pain Syndrome
Maria L. Breser, Ruben D. Motrich, Leonardo R. Sanchez, Juan P. Mackern-Oberti, and Virginia E. Rivero
- 3134 Autoreactive Th1 Cells Activate Monocytes To Support Regional Th17 Responses in Inflammatory Arthritis
Donald M. Simons, Soyoung Oh, Elizabeth Kropf, Malinda Aitken, Victoria Garcia, Alissa Basehoar, and Andrew J. Caton

CLINICAL AND HUMAN IMMUNOLOGY

- 3142 IL-7 Licenses Activation of Human Liver Intrasinusoidal Mucosal-Associated Invariant T Cells
Xin-Zi Tang, Juandy Jo, Anthony T. Tan, Elena Sandalova, Adeline Chia, Kai Chah Tan, Kang Hoe Lee, Adam J. Gehring, Gennaro De Libero, and Antonio Bertoletti

IMMUNE REGULATION

- 3153 A Dynamic Dual Role of IL-2 Signaling in the Two-Step Differentiation Process of Adaptive Regulatory T Cells
Zhiyong Guo, Mithun Khattar, Paul M. Schroder, Yoshihiro Miyahara, Guohua Wang, Xiaoshung He, Wenhao Chen, and Stanislaw M. Stepkowski
- 3163 β 2-Adrenoreceptor Agonist Inhibits Antigen Cross-Presentation by Dendritic Cells
Julie Hervé, Laurence Dubreil, Virginie Tardif, Mickael Terme, Sylvie Pogu, Ignacio Anegón, Bertrand Rozec, Chantal Gauthier, Jean-Marie Bach, and Philippe Blancou
- 3172 DC-SCRIPT Regulates Glucocorticoid Receptor Function and Expression of Its Target GILZ in Dendritic Cells
Saartje Hontelez, Nina Karthaus, Maaike W. Looman, Marleen Ansems, and Gosse J. Adema
- 3180 Active Demethylation of the *Foxp3* Locus Leads to the Generation of Stable Regulatory T Cells within the Thymus
Aras Toker, Dirk Engelbert, Garima Garg, Julia K. Polansky, Stefan Floess, Takahisa Miyao, Udo Baron, Sandra Düber, Robert Geffers, Pascal Giehr, Sonja Schallenberg, Karsten Kretschmer, Sven Olek, Jörn Walter, Siegfried Weiss, Shohei Hori, Alf Hamann, and Jochen Huehn

- 3189 **Constitutively CD40–Activated B Cells Regulate CD8 T Cell Inflammatory Response by IL-10 Induction**
Pandelakis A. Koni, Anna Bolduc, Mayuko Takezaki, Yutetsu Ametani, Lei Huang, Jeffrey R. Lee, Stephen L. Nutt, Masahito Kamanaka, Richard A. Flavell, Andrew L. Mellor, Takeshi Tsubata, and Michiko Shimoda
- 3197 **Orai1 Function Is Essential for T Cell Homing to Lymph Nodes**
Milton L. Greenberg, Ying Yu, Sabrina Leverrier, Shenyan L. Zhang, Ian Parker, and Michael D. Cahalan
- 3207 **Differential Localization of T-bet and Eomes in CD8 T Cell Memory Populations**
Laura M. McLane, Pinaki P. Banerjee, Gabriela L. Cosma, George Makedonas, E. John Wherry, Jordan S. Orange, and Michael R. Betts
- 3216 **KIR3DL2 Binds to HLA-B27 Dimers and Free H Chains More Strongly than Other HLA Class I and Promotes the Expansion of T Cells in Ankylosing Spondylitis**
Isabel Wong-Baeza, Anna Ridley, Jackie Shaw, Hiroko Hatano, Oliwia Rysnik, Kirsty McHugh, Christopher Piper, Simon Brackenbridge, Ricardo Fernandes, Anthoni Chan, Paul Bowness, and Simon Kollnberger
- 3225 **Independent and Interdependent Immunoregulatory Effects of IL-27, IFN- β , and IL-10 in the Suppression of Human Th17 Cells and Murine Experimental Autoimmune Encephalomyelitis**
Denise C. Fitzgerald, Zoë Fonseca-Kelly, Melissa L. Cullimore, Pegah Safabakhsh, Christiaan J. M. Saris, Guang-Xian Zhang, and Abdolmohamad Rostami
- 3235 **Regulation of Foxp3⁺ Inducible Regulatory T Cell Stability by SOCS2**
Camille A. Knosp, Chris Schiering, Shaun Spence, Helen P. Carroll, Hendrick J. Nel, Megan Osbourn, Ruaidhri Jackson, Oksana Lyubomska, Bernard Malissen, Rebecca Ingram, Denise C. Fitzgerald, Fiona Powrie, Padraic G. Fallon, James A. Johnston, and Adrien Kissenpfennig
- 3246 **The Ataxia Telangiectasia Mutated Kinase Pathway Regulates IL-23 Expression by Human Dendritic Cells**
Qunwei Wang, Hester A. Franks, Stephanie J. Lax, Mohamed El Refaee, Anna Malecka, Sabaria Shah, Ian Spendlove, Michael J. Gough, Claire Seedhouse, Srinivasan Madhusudan, Poulam M. Patel, and Andrew M. Jackson

IMMUNE SYSTEM DEVELOPMENT

- 3256 **Requirement for Dicer in Survival of Proliferating Thymocytes Experiencing DNA Double-Strand Breaks**
Brenna L. Brady, Levi J. Rupp, and Craig H. Basing
- 3267 **Programmed Downregulation of CCR6 Is Important for Establishment of Epidermal $\gamma\delta$ T Cells by Regulating Their Thymic Egress and Epidermal Location**
Shaomin Hu and Na Xiong
- 3276 **Loss of T Cell Progenitor Checkpoint Control Underlies Leukemia Initiation in *Rag1*-Deficient Nonobese Diabetic Mice**
Mary A. Yui, Ni Feng, Jingli A. Zhang, Chen Yee Liaw, Ellen V. Rothenberg, and Jeffrey A. Longmate
- 3289 **IRF7-Dependent IFN- β Production in Response to RANKL Promotes Medullary Thymic Epithelial Cell Development**
Dennis C. Otero, Darren P. Baker, and Michael David
- 3299 **Functional Education of Invariant NKT Cells by Dendritic Cell Tuning of SHP-1**
Anna Napolitano, Paola Pittoni, Lucie Beaudoin, Agnes Lehuen, David Voehringer, H. Robson MacDonald, Paolo Dellabona, and Giulia Casorati
- 3309 **Peyer's Patch Inducer Cells Play a Leading Role in the Formation of B and T Cell Zone Architecture**
Reiko Nakagawa, Atsushi Togawa, Takashi Nagasawa, and Shin-ichi Nishikawa

IMMUNOTHERAPY AND VACCINES

- 3319 **Antigen Choice Determines Vaccine-Induced Generation of Immunogenic versus Tolerogenic Dendritic Cells That Are Marked by Differential Expression of Pancreatic Enzymes**
Adam M. Farkas, Douglas M. Marvel, and Olivera J. Finn

- 3328 Fast Dendritic Cells Stimulated with Alternative Maturation Mixtures Induce Polyfunctional and Long-Lasting Activation of Innate and Adaptive Effector Cells with Tumor-Killing Capabilities
Chiara Massa and Barbara Seliger
- 3338 Intradermal Delivery of TLR Agonists in a Human Explant Skin Model: Preferential Activation of Migratory Dendritic Cells by Polyribosinic-Polyribocytidylic Acid and Peptidoglycans
Dinja Oosterhoff, Moniek Heusinkveld, Sinéad M. Loughheed, Ilona Kosten, Malin Lindstedt, Sven C. M. Bruijns, Thomas van Es, Yvette van Kooyk, Sjoerd H. van der Burg, and Tanja D. de Gruijl

INFECTIOUS DISEASE AND HOST RESPONSE

- 3346 IFN- α Induces APOBEC3G, F, and A in Immature Dendritic Cells and Limits HIV-1 Spread to CD4⁺ T Cells
Venkatramanan Mohanram, Annette E. Sköld, Susanna M. Bächle, Sushil Kumar Pathak, and Anna-Lena Spetz
- 3354 Regulation of Cystic Fibrosis Transmembrane Conductance Regulator by MicroRNA-145, -223, and -494 Is Altered in Δ F508 Cystic Fibrosis Airway Epithelium
Irene K. Oglesby, Sanjay H. Chotirmall, Noel G. McElvaney, and Catherine M. Greene
- 3363 Malaria Inhibits Surface Expression of Complement Receptor 1 in Monocytes/Macrophages, Causing Decreased Immune Complex Internalization
Cristina Fernandez-Arias, Jean Pierre Lopez, Jean Nikolae Hernandez-Perez, Maria Dolores Bautista-Ojeda, OraLee Branch, and Ana Rodriguez
- 3373 Impaired TLR5 Functionality Is Associated with Survival in Melioidosis
T. Eoin West, Narisara Chantratita, Wirongrong Chierakul, Direk Limmathurotsakul, Vanaporn Wuthiekanun, Nicole D. Myers, Mary J. Emond, Mark M. Wurfel, Thomas R. Hawn, Sharon J. Peacock, and Shawn J. Skerrett
- 3380 Parasite-Derived Arginase Influences Secondary Anti-*Leishmania* Immunity by Regulating Programmed Cell Death-1–Mediated CD4⁺ T Cell Exhaustion
Zhirong Mou, Helen M. Muleme, Dong Liu, Ping Jia, Ifeoma B. Okwor, Shiby M. Kuriakose, Stephen M. Beverley, and Jude E. Uzonna
- 3390 Disparate Roles for STAT5 in Primary and Secondary CTL Responses
Diana M. Mitchell and Matthew A. Williams
- 3399 The Context of Gene Expression Defines the Immunodominance Hierarchy of Cytomegalovirus Antigens
Iryna Dekhriarenko, Michael A. Jarvis, Zsolt Ruzsics, and Luka Čičin-Šain
- 3410 Competition for Antigen at the Level of the APC Is a Major Determinant of Immunodominance during Memory Inflation in Murine Cytomegalovirus Infection
Lila A. Farrington, Tameka A. Smith, Finn Grey, Ann B. Hill, and Christopher M. Snyder
- 3417 *Staphylococcus aureus* Phenol-Soluble Modulin Peptides Modulate Dendritic Cell Functions and Increase In Vitro Priming of Regulatory T Cells
Jens Schreiner, Dorothee Kretschmer, Juliane Klenk, Michael Otto, Hans-Jörg Bühring, Stefan Stevanovic, Ji Ming Wang, Sandra Beer-Hammer, Andreas Peschel, and Stella E. Autenrieth
- 3427 Galectin-3 Negatively Regulates Dendritic Cell Production of IL-23/IL-17–Axis Cytokines in Infection by *Histoplasma capsulatum*
Sheng-Yang Wu, Jhang-Sian Yu, Fu-Tong Liu, Shi-Chuen Miauw, and Betty A. Wu-Hsieh
- 3438 Antigen-Specific Memory Regulatory CD4⁺Foxp3⁺ T Cells Control Memory Responses to Influenza Virus Infection
Erik L. Brincks, Alan D. Roberts, Tres Cookenham, Stewart Sell, Jacob E. Kohlmeier, Marcia A. Blackman, and David L. Woodland

INNATE IMMUNITY AND INFLAMMATION

- 3447 Implicating Exudate Macrophages and Ly-6C^{high} Monocytes in CCR2-Dependent Lung Fibrosis following Gene-Targeted Alveolar Injury
John J. Osterholzer, Michal A. Olszewski, Benjamin J. Murdock, Gwo-Hsiao Chen, John R. Erb-Downward, Natalya Subbotina, Keely Browning, Yujing Lin, Roger E. Morey, Jeremy K. Dayrit, Jeffrey C. Horowitz, Richard H. Simon, and Thomas H. Sisson

- 3458 Nascent Endothelium Initiates Th2 Polarization of Asthma
Kewal Asosingh, Georgiana Cheng, Weiling Xu, Benjamin M. Savasky, Mark A. Aronica, Xiaoxia Li, and Serpil C. Erzurum
- 3466 Troxerutin Counteracts Domoic Acid–Induced Memory Deficits in Mice by Inhibiting CCAAT/Enhancer Binding Protein β –Mediated Inflammatory Response and Oxidative Stress
Jun Lu, Dong-mei Wu, Yuan-lin Zheng, Bin Hu, Wei Cheng, Zi-feng Zhang, and Meng-qiu Li
- 3480 Peptidoglycan Recognition Protein 1 Enhances Experimental Asthma by Promoting Th2 and Th17 and Limiting Regulatory T Cell and Plasmacytoid Dendritic Cell Responses
Shin Yong Park, Xuefang Jing, Dipika Gupta, and Roman Dziarski
- 3493 C5a Receptor Signaling Prevents Folate Deficiency–Induced Neural Tube Defects in Mice
Kerina J. Denny, Liam G. Coulthard, Angela Jeanes, Steven Lisgo, David G. Simmons, Leonie K. Callaway, Bogdan Wlodarczyk, Richard H. Finnell, Trent M. Woodruff, and Stephen M. Taylor
- 3500 The Role of IL-1 β in the Early Tumor Cell–Induced Angiogenic Response
Yaron Carmi, Shahar Dotan, Peleg Rider, Irena Kaplanov, Malka R. White, Rona Baron, Shai Abutbul, Monica Huszar, Charles A. Dinarello, Ron N. Apte, and Elena Voronov
- 3510 The Inflammatory Twitch as a General Strategy for Controlling the Host Response
Joshua J. Pothen, Matthew E. Poynter, and Jason H. T. Bates
- 3517 Gene Deletion of *Gabarap* Enhances Nlrp3 Inflammasome-Dependent Inflammatory Responses
Zhirong Zhang, Xiaozheng Xu, Jianhui Ma, Jianfeng Wu, Yanhai Wang, Rongbin Zhou, and Jiahuai Han
- 3525 Tuning Innate Immune Activation by Surface Texturing of Polymer Microparticles: The Role of Shape in Inflammasome Activation
Christine A. Vaine, Milan K. Patel, Jintao Zhu, Eunji Lee, Robert W. Finberg, Ryan C. Hayward, and Evelyn A. Kurt-Jones
- 3533 Circulating Monocytes Are Reduced by Sphingosine-1-Phosphate Receptor Modulators Independently of S1P₃
Nuruddeen D. Lewis, Sokol A. Haxhinasto, Shawn M. Anderson, Dimitria E. Stefanopoulos, Steven E. Fogal, Prathima Adusumalli, Sudha N. Desai, Lori A. Patnaude, Susan M. Lukas, Kelli R. Ryan, Anthony J. Slavin, Maryanne L. Brown, and Louise K. Modis
- 3541 A Critical Role for TLR4 Induction of Autophagy in the Regulation of Enterocyte Migration and the Pathogenesis of Necrotizing Enterocolitis
Matthew D. Neal, Chhinder P. Sodhi, Mitchell Dyer, Brian T. Craig, Misty Good, Hongpeng Jia, Ibrahim Yazji, Amin Afrazi, Ward M. Richardson, Donna Beer-Stolz, Congrong Ma, Thomas Prindle, Zachary Grant, Maria F. Branca, John Ozolek, and David J. Hackam
- 3552 Blocking Properdin, the Alternative Pathway, and Anaphylatoxin Receptors Ameliorates Renal Ischemia-Reperfusion Injury in Decay-Accelerating Factor and CD59 Double-Knockout Mice
Takashi Miwa, Sayaka Sato, Damodar Gullipalli, Masaomi Nangaku, and Wen-Chao Song
- 3560 Essential Role of Surface-Bound Complement Factor H in Controlling Immune Complex–Induced Arthritis
Nirmal K. Banda, Gaurav Mehta, Viviana P. Ferreira, Claudio Cortes, Matthew C. Pickering, Michael K. Pangburn, William P. Arend, and V. Michael Holers
- 3570 Functional Macrophage Heterogeneity in a Mouse Model of Autoimmune Central Nervous System Pathology
Anat London, Inbal Benhar, Mary J. Mattapallil, Matthias Mack, Rachel R. Caspi, and Michal Schwartz
- 3579 Exosome-like Nanoparticles from Intestinal Mucosal Cells Carry Prostaglandin E₂ and Suppress Activation of Liver NKT Cells
Zhong-Bin Deng, Xiaoying Zhuang, Songwen Ju, Xiaoyu Xiang, Jingyao Mu, Yuelong Liu, Hong Jiang, Lifeng Zhang, James Mobley, Craig McClain, Wenke Feng, William Grizzle, Jun Yan, Donald Miller, Mitchell Kronenberg, and Huang-Ge Zhang

- 3590 Activation of NLRP3 Inflammasome in Alveolar Macrophages Contributes to Mechanical Stretch-Induced Lung Inflammation and Injury
Jianbo Wu, Zhibo Yan, David E. Schwartz, Jingui Yu, Asrar B. Malik, and Guochang Hu
- 3600 An Extraribosomal Function of Ribosomal Protein L13a in Macrophages Resolves Inflammation
Darshana Poddar, Abhijit Basu, William M. Baldwin, III, Roman V. Kondratov, Sailen Barik, and Barsanjit Mazumder
- 3613 Novel Function of Trim44 Promotes an Antiviral Response by Stabilizing VISA
Bo Yang, Jie Wang, Yanming Wang, Haiyan Zhou, Xiaodong Wu, Zhigang Tian, and Bing Sun
- 3620 CaMKI α Regulates AMP Kinase–Dependent, TORC-1–Independent Autophagy during Lipopolysaccharide-Induced Acute Lung Neutrophilic Inflammation
Lanping Guo, Jennifer L. Stripay, Xianghong Zhang, Richard D. Collage, Mei Hulver, Evie H. Carchman, Gina M. Howell, Brian S. Zuckerbraun, Janet S. Lee, and Matthew R. Rosengart
- 3629 Critical Role of ASC Inflammasomes and Bacterial Type IV Secretion System in Caspase-1 Activation and Host Innate Resistance to *Brucella abortus* Infection
Marco Tulio R. Gomes, Priscila C. Campos, Fernanda S. Oliveira, Patricia P. Corsetti, Karina R. Bortoluci, Larissa D. Cunha, Dario S. Zamboni, and Sergio C. Oliveira
- 3639 NKG2D Blockade Inhibits Poly(I:C)-Triggered Fetal Loss in Wild Type but Not in IL-10^{-/-} Mice
Jessica E. Thaxton, Tania Nevers, Eliana O. Lippe, Sandra M. Blois, Shigeru Saito, and Surendra Sharma
- 3648 Class I Phosphoinositide-3-Kinases and Src Kinases Play a Nonredundant Role in Regulation of Adhesion-Independent and -Dependent Neutrophil Reactive Oxygen Species Generation
Laura Fumagalli, Carlo C. Campa, Giulia Germena, Clifford A. Lowell, Emilio Hirsch, and Giorgio Berton
- 3661 Dedicator of Cytokinesis 8 Interacts with Talin and Wiskott-Aldrich Syndrome Protein To Regulate NK Cell Cytotoxicity
Hyoungjun Ham, Sabrice Guerrier, Jungjin Kim, Renee A. Schoon, Erik L. Anderson, Michael J. Hamann, Zhenkun Lou, and Daniel D. Billadeau
- 3670 BET Protein Function Is Required for Inflammation: Brd2 Genetic Disruption and BET Inhibitor JQ1 Impair Mouse Macrophage Inflammatory Responses
Anna C. Belkina, Barbara S. Nikolajczyk, and Gerald V. Denis
- 3679 IL-1 Receptor Regulates microRNA-135b Expression in a Negative Feedback Mechanism during Cigarette Smoke–Induced Inflammation
Sabina Halappanavar, Jake Nikota, Dongmei Wu, Andrew Williams, Carole L. Yauk, and Martin Stampfli
- 3687 1,25-Dihydroxyvitamin D Promotes Negative Feedback Regulation of TLR Signaling via Targeting MicroRNA-155–SOCS1 in Macrophages
Yunzi Chen, Weicheng Liu, Tao Sun, Yong Huang, Youli Wang, Dilip K. Deb, Dosuk Yoon, Juan Kong, Ravi Thadhani, and Yan Chun Li
- 3696 CXCL9 Causes Heterologous Desensitization of CXCL12-Mediated Memory T Lymphocyte Activation
Oliver Giegold, Nadine Ogrissek, Cornelia Richter, Matthias Schröder, Martina Herrero San Juan, Josef M. Pfeilschifter, and Heinfried H. Radeke
- 3706 Nucleotide Oligomerization Domain 1 Enhances IFN- γ Signaling in Gastric Epithelial Cells during *Helicobacter pylori* Infection and Exacerbates Disease Severity
Cody C. Allison, Jonathan Ferrand, Louise McLeod, Mohammad Hassan, Maria Kaparakis-Liaskos, Alexandra Grubman, Prithi S. Bhathal, Anouk Dev, William Sievert, Brendan J. Jenkins, and Richard L. Ferrero
- 3716 A Nonsense Polymorphism (R392X) in TLR5 Protects from Obesity but Predisposes to Diabetes
Nasser M. Al-Daghri, Mario Clerici, Omar Al-Attas, Diego Forni, Majed S. Alokail, Khalid M. Alkharfy, Shaun Sabico, Abdul Khader Mohammed, Rachele Cagliani, and Manuela Sironi

MOLECULAR AND STRUCTURAL IMMUNOLOGY

- 3721 Deciphering Complement Receptor Type 1 Interactions with Recognition Proteins of the Lectin Complement Pathway
Mickaël Jacquet, Monique Lacroix, Sarah Ancelet, Evelyne Gout, Christine Gaboriaud, Nicole M. Thielens, and Véronique Rossi

- 3732 Reversion of Somatic Mutations of the Respiratory Syncytial Virus–Specific Human Monoclonal Antibody Fab19 Reveal a Direct Relationship between Association Rate and Neutralizing Potency
John T. Bates, Christopher J. Keefer, Thomas J. Utey, Bruno E. Correia, William R. Schief, and James E. Crowe, Jr.

- 3740 Shear Stress–Dependent Downregulation of the Adhesion-G Protein–Coupled Receptor CD97 on Circulating Leukocytes upon Contact with Its Ligand CD55
Olga N. Karpus, Henrike Veninga, Robert M. Hoek, Dennis Flierman, Jaap D. van Buul, Corianne C. vandenAkker, Ed vanBavel, M. Edward Medof, René A. W. van Lier, Kris A. Reedquist, and Jörg Hamann

- 3749 GRB2-Mediated Recruitment of THEMIS to LAT Is Essential for Thymocyte Development
Wolfgang Paster, Claudia Brockmeyer, Guo Fu, Philip C. Simister, Ben de Wet, Ana Martinez-Riaño, John A. H. Hoerter, Stephan M. Feller, Christoph Wülfing, Nicholas R. J. Gascoigne, and Oreste Acuto

MUCOSAL IMMUNOLOGY

- 3757 MicroRNA-375 Regulation of Thymic Stromal Lymphopoietin by Diesel Exhaust Particles and Ambient Particulate Matter in Human Bronchial Epithelial Cells
Bertram Bleck, Gabriele Grunig, Amanda Chiu, Mengling Liu, Terry Gordon, Angeliki Kazeros, and Joan Reibman

TRANSPLANTATION

- 3764 Direct Alloreactivity Is More Susceptible to Regulation by Natural Regulatory T Cells Than Indirect Alloreactivity
Grégory Noël, Meriam Belghith, Benoit Bélanger, Caroline Leduc, and Claude Daniel

- 3772 Delta-like Ligand 4 Identifies a Previously Uncharacterized Population of Inflammatory Dendritic Cells That Plays Important Roles in Eliciting Allogeneic T Cell Responses in Mice
Kazuhiro Mochizuki, Fang Xie, Shan He, Qing Tong, Yongnian Liu, Izumi Mochizuki, Yajun Guo, Koji Kato, Hideo Yagita, Shin Mineishi, and Yi Zhang

TUMOR IMMUNOLOGY

- 3783 Myeloid-Derived Suppressor Cells Suppress Antitumor Immune Responses through IDO Expression and Correlate with Lymph Node Metastasis in Patients with Breast Cancer
Jinpu Yu, Weijiao Du, Fang Yan, Yue Wang, Hui Li, Shui Cao, Wenwen Yu, Chun Shen, Juntian Liu, and Xiubao Ren

- 3798 Macrophage Scavenger Receptor A Promotes Tumor Progression in Murine Models of Ovarian and Pancreatic Cancer
Claudine Neyen, Annette Plüddemann, Subhankar Mukhopadhyay, Eleni Maniati, Maud Bossard, Siamon Gordon, and Thorsten Hagemann

- 3806 Host B7x Promotes Pulmonary Metastasis of Breast Cancer
Yael M. Abadi, Hyungjun Jeon, Kim C. Ohaegbulam, Lisa Scandiuzzi, Kaya Ghosh, Kimberly A. Hofmeyer, Jun Sik Lee, Anjana Ray, Claudia Gravekamp, and Xingxing Zang

- 3815 Myeloid-Derived Suppressor Cells Regulate Growth of Multiple Myeloma by Inhibiting T Cells in Bone Marrow
Indu R. Ramachandran, Anna Martner, Alexandra Pisklakova, Thomas Condamine, Tess Chase, Thomas Vogl, Johannes Roth, Dmitry Gabrilovich, and Yulia Nefedova

CORRECTIONS

- 3824 Correction: MyD88: A Critical Adaptor Protein in Innate Immunity Signal Transduction
Neil Warner and Gabriel Núñez

- 3825 AUTHOR INDEX