IN THIS ISSUE

3497 Protease Inhibitors Perturb Peptide Presentation See article p. 3595
Treg Transitions Impact Tolerance See article p. 3665
Interrogating HIV Vaccine B Cell Responses See article p. 3729
Fish Virus Is Unfriendly to IFN See article p. 3744
Making Memories without IL-15 See article p. 3920

TRANSLATING IMMUNOLOGY

3499 The Opportunity To Eradicate Peste des Petits Ruminants
Jeffrey C. Mariner, Bryony A. Jones, Karl M. Rich, Samuel Thevasagayam, John Anderson, Martyn Jeggo, Yi Cai,
Andrew R. Peters, and Peter L. Roeder

PILLARS OF IMMUNOLOGY

3507 Discovery of the γδ TCR: Act II
Willi K. Born and Rebecca L. O’Brien

Michael B. Brenner, Joanne McLean, Deno P. Dialynas, Jack L. Strominger, John A. Smith, Frances L. Owen,
J. G. Seidman, Stephen Ip, Fred Rosen, and Michael S. Krangel

3514 Pillars Article: A Functional T3 Molecule Associated with a Novel Heterodimer on the Surface of
Ilan Bank, Ronald A. DePinho, Michael B. Brenner, Judy Cassimeris, Frederick W. Alt, and Leonard Chess

BRIEF REVIEWS

3517 Assembly and Expression of Shark Ig Genes
Ellen Hsu

On the cover: Using multiplex fluorescent microscopy to examine the distribution of T cell subsets in an untreated
SCC7 VII transplantable tumor (CD3 [red], CD8 [yellow], Foxp3 [green], Ki67 [orange], DAPI [blue]). Feng, Z., S. M. Jensen,
CUTTING EDGE

3525 Cutting Edge: BAFF Promotes Autoantibody Production via TACI-Dependent Activation of Transitional B Cells
Holly M. Jacobs, Christopher D. Thouvenel, Sarah Leach, Tanvi Arkatkar, Genita Metzler, Nicole E. Scharping, Nikita S. Kolhatkar, David J. Rawlings, and Shaun W. Jackson

3532 Cutting Edge: Innate Lymphoid Cells Suppress Homeostatic T Cell Expansion in Neonatal Mice
Ute Bank, Katrin Deiser, Daniela Finke, Günter J. Hämerling, Bernd Arnold, and Thomas Schüler

3537 Cutting Edge: Foxp1 Controls Naive CD8+ T Cell Quiescence by Simultaneously Repressing Key Pathways in Cellular Metabolism and Cell Cycle Progression
Haiyong Wei, Juanlin Geng, Bi Shi, Zhenghui Liu, Yin-Hu Wang, Anna C. Stevens, Stephanie L. Sprout, Min Yao, Haikun Wang, and Hui Hu

3542 Cutting Edge: Integrin α4 Is Required for Regulatory B Cell Control of Experimental Autoimmune Encephalomyelitis
Simon Glatigny, Catriona A. Wagner, and Estelle Bettelli

ALLERGY AND OTHER HYPERSENSITIVITIES

3547 TNF-α and Macrophages Are Critical for Respiratory Syncytial Virus–Induced Exacerbations in a Mouse Model of Allergic Airways Disease
Thi Hiep Nguyen, Steven Maltby, Judie L. Simpson, Fiona Eyers, Katherine J. Baines, Peter G. Gibson, Paul S. Foster, and Ming Yang

3559 Subcutaneous Allergic Sensitization to Protease Allergen Is Dependent on Mast Cells but Not IL-33: Distinct Mechanisms between Subcutaneous and Intranasal Routes
Seiji Kamiya, Mayu Suzuki, Mutsumi Hara, Sakiko Shimura, Hirono Ochi, Natsuko Maruyama, Akira Matuda, Hirohisa Saito, Susumu Nakae, Hajime Suto, Saori Ichikawa, Shigaku Ikeda, Hideoki Ogawa, Ko Okumura, and Toshiro Takai

3570 TIGIT Enhances Antigen-Specific Th2 Recall Responses and Allergic Disease
Evangelia Kourepini, Nikolaos Paschalidis, Davina C. M. Simoes, Maria Aggelakopoulou, Jane L. Grogan, and Vily Pansoutsakopoulou

ANTIGEN RECOGNITION AND RESPONSES

3581 CD83 Modulates B Cell Activation and Germinal Center Responses
Lena Krzyzak, Christine Seitz, Anne Urban, Stefan Hutzler, Christian Ostalecki, Joachim Gläsner, Andreas Hiergeist, André Gesner, Thomas H. Winkler, Alexander Steinkasserer, and Lars Nitschke

3595 HIV Protease Inhibitor–Induced Cathepsin Modulation Alters Antigen Processing and Cross-Presentation
Georgio Kourjian, Marijana Rucevic, Matthew J. Berberich, Jens Dinter, Daniel Wambua, Julie Boucau, and Sylvie Le Gall

3608 Defining Viral Defective Ribosomal Products: Standard and Alternative Translation Initiation Events Generate a Common Peptide from Influenza A Virus M2 and M1 mRNAs

CLINICAL AND HUMAN IMMUNOLOGY

3618 Restricting Glutamine or Glutamine-Dependent Purine and Pyrimidine Syntheses Promotes Human T Cells with High FOXP3 Expression and Regulatory Properties
Barbara Metzler, Patrick Gfeller, and Elisabeth Guinet

IMMUNE REGULATION

3631 TGF-β–Induced Regulatory T Cells Directly Suppress B Cell Responses through a Noncytotoxic Mechanism
Anping Xu, Ya Liu, Weiqian Chen, Julie Wang, Youqiu Xue, Feng Huang, Liming Rong, Jin Lin, Dahai Liu, Mei Yan, Quan-Zhen Li, Bin Li, Jianxun Song, Nancy Olsen, and Song Guo Zheng
Effector γδ T Cell Differentiation Relies on Master but Not Auxiliary Th Cell Transcription Factors
Joana Barros-Martins, Nina Schmolka, Diana Fontinha, Marta Pires de Miranda, J. Pedro Simas, Ingrid Brok, Cristina Ferreira, Marc Veldhoen, Bruno Silva-Santos, and Karine Serre

Transient Surface CCR5 Expression by Naive CD8+ T Cells within Inflamed Lymph Nodes Is Dependent on High Endothelial Venule Interaction and Augments Th Cell–Dependent Memory Response
David Askew, Charles A. Su, Deborah S. Barkauskas, R. Dixon Dorand, Jay Myers, Rachel Liou, Joseph Nihale, and Alex Y. Huang

Developmental Progression and Interrelationship of Central and Effector Regulatory T Cell Subsets
Kevin H. Toomer, Xiaomei Yuan, Jing Yang, Michael J. Dee, Aixin Yu, and Thomas R. Malek

Pneumococcal Surface Protein A Plays a Major Role in Streptococcus pneumoniae–Induced Immunosuppression
Saumyaa, Lindsey Pujanauski, Jesus Colino, Michael Flora, Raul M. Torres, Elaine Tuomanen, and Clifford M. Snapper

Signal Inhibitory Receptor on Leukocytes-1 Limits the Formation of Neutrophil Extracellular Traps, but Preserves Intracellular Bacterial Killing
Kristof Van Avonds, Maarten van der Linden, Paul H. Naccache, David A. Egan, and Linde Meynard

TLR-Mediated Innate Production of IFN-γ by CD8+ T Cells Is Independent of Glycolysis
Fiamma Salerno, Aurelie Guislain, Dilay Cansever, and Monika C. Walkers

Lipopolysaccharide-Induced Chorioamnionitis Promotes IL-1–Dependent Inflammatory FOXP3+ CD4+ T Cells in the Fetal Rhesus Macaque
Cesar M. Rueda, Pietro Presicce, Courtney M. Jackson, Lisa A. Miller, Subas G. Kallapur, Alan H. Jobe, and Claire A. Chougnet

Functional Langerinhigh-Expressing Langerhans-like Cells Can Arise from CD14highCD16- Human Blood Monocytes in Serum-Free Condition
Gaëlle Picarda, Coraline Chéneau, Jean-Marc Humbert, Gaëlle Bériou, Paul Pilet, Jérôme Martin, Franck Duteille, Pierre Perrot, Frédérique Bellier-Waast, Michèle Helan, Fabienne Haspot, Fabien Guillou, Regis Josien, and Franck Albert Halary

High-Resolution Longitudinal Study of HIV-1 Env Vaccine–Elicited B Cell Responses to the Virus Primary Receptor Binding Site Reveals Affinity Maturation and Clonal Persistence
Yimeng Wang, Christopher Sundling, Richard Wilson, Siy O’Dell, Yajing Chen, Kaifan Dai, Ganesh E. Phad, Jiang Zhu, Yongli Xiao, John R. Mascola, Gunilla B. Karlsson Hedestam, Richard T. Wyatt, and Yuxing Li

Spring Viremia of Carp Virus N Protein Suppresses Fish IFNφ1 Production by Targeting the Mitochondrial Antiviral Signaling Protein
Long-Feng Lu, Shun Li, Xiao-Bing Lu, Scott E. LaPatra, Nu Zhang, Xu-Jie Zhang, Dan-Dan Chen, Pin Nie, and Yong-An Zhang

Bacterial DNA Protects Monocytic Cells against HIV-Vpr–Induced Mitochondrial Membrane Depolarization
Mansi Saxena, Aurelia Busca, Martin Holcik, and Ashok Kumar

Maternal Antibiotic Treatment Impacts Development of the Neonatal Intestinal Microbiome and Antiviral Immunity
Gabriela Gonzalez-Perez, Allison L. Hicks, Tessa M. Tekieli, Caleb M. Radens, Brent L. Williams, and Esi S. N. Lamoué-Smith
Identification of Immune Effectors Essential to the Control of Primary and Secondary Intranasal Infection with *Brucella melitensis* in Mice
Delphine Hanot Mambres, Arnaud Machelart, Georges Potemberg, Carl De Trez, Bernhard Ryffel, Jean-Jacques Letesson, and Eric Muraille

Gliarial Cell–Elicited Activation of Brain Microvasculature in Response to *Brucella abortus* Infection Requires ASC Inflammasome–Dependent IL-1β Production
M. Cruz Miraglia, Miriam M. Costa Franco, Ana M. Rodriguez, Paula M. Q. Bellozi, Carina C. Ferrari, Maria I. Farias, Vida A. Dennis, Paula Barrionuevo, Antonio C. P. de Oliveira, Fernando Pitossi, Kwang Sik Kim, M. Victoria Delpino, Sergio Costa Oliveira, and Guillermo H. Giambartolomei

HIV-1–Mediated BAFF Secretion in Macrophages Does Not Require Endosomal TLRs, Type-I IFN, and Nef, but Depends on the Cellular Phenotype Status
Alejandro M. Gomez, Michel Ouellet, Alexandre Desbiere, Yann Breton, and Michel J. Tremblay

Relationship of NKG2C Copy Number with the Distribution of Distinct Cytomegalovirus-Induced Adaptive NK Cell Subsets
Aura Muntasell, Aldi Pupuleku, Elisa Cisneros, Andrea Vera, Manuela Muraru, Carlos Vilches, and Miguel López-Botet

**INNATE IMMUNITY AND INFLAMMATION**

Ga2i2 and Ga3i3 Differentially Regulate Arrest from Flow and Chemotaxis in Mouse Neutrophils
Yoshihiro Kawanou, Micha Adler, Hong Zhang, Alex Groisman, and Klaus Ley

TLR10 Is a Negative Regulator of Both MyD88-Dependent and -Independent TLR Signaling
Song Jiang, Xinyan Li, Nicholas J. Hess, Yue Guan, and Richard I. Tapping

A MicroRNA-Mediated Positive Feedback Regulatory Loop of the NF-κB Pathway in *Litopenaeus vannamei*
Hongliang Zuo, Jia Yuan, Yonggui Chen, Sedong Li, Ziqi Su, Erman Wei, Chaozheng Li, Shaoping Weng, Xiaopeng Xu, and Jianguo He

Topical Application of Fingolimod Perturbs Cutaneous Inflammation
Wai Y. Sun, David P. Dimasi, Melissa R. Pitman, YiZhong Zhuang, Robert Heddle, Stuart M. Pitson, Michele A. Grimbaldeston, and Claudine S. Bonder

Raftlin Controls Lipopolysaccharide-Induced TLR4 Internalization and TICAM-1 Signaling in a Cell Type–Specific Manner
Megumi Tatematsu, Ryuji Yoshida, Yuka Morioka, Noriko Ishii, Kenji Funami, Ayako Watanabe, Kazuko Saeki, Tiukasa Seya, and Misako Matsumoto

MOV10 Provides Antiviral Activity against RNA Viruses by Enhancing RIG-I–MAVS-Independent IFN Induction
Rolando A. Caueas, Arundhati Ghosh, Christina Wallerath, Veit Hormung, Carolyn B. Coyne, and Saumendra N. Sarkar

Elevated Response to Type I IFN Enhances RANKL-Mediated Osteoclastogenesis in Usp18-Knockout Mice
Hwa Young Yim, Cheolkyn Park, Yong Deok Lee, Kei-ichiro Arimoto, Raok Jeon, Sung Hee Baek, Dong-er Zhang, Hong-Hee Kim, and Keun Il Kim

**MOLECULAR AND STRUCTURAL IMMUNOLOGY**

The C-Terminal Acidic Region of Calreticulin Mediates Phosphatidylserine Binding and Apoptotic Cell Phagocytosis
Sanjeeva Joseph Wijeyesakere, Sukhmani Kaur Bedi, David Huynh, and Malini Raghavan

**MUCOSAL IMMUNOLOGY**

Glucocorticoids Suppress CCR9-Mediated Chemotaxis, Calcium Flux, and Adhesion to MAdCAM-1 in Human T Cells
Emily Wendt, Gemma E. White, Helen Ferry, Michael Huhn, David R. Greaves, and Satish Keshav

IL-15–Independent Maintenance of Tissue-Resident and Boosted Effector Memory CD8 T Cells
Jason M. Schenkel, Kathryn A. Fraser, Kerry A. Casey, Lalit K. Beura, Kristen E. Pauken, Vaisa Veys, and David Masopust