



This information is current as  
of November 23, 2020.

Why *The JI*? [Submit online.](#)

- **Rapid Reviews! 30 days\*** from submission to initial decision
- **No Triage!** Every submission reviewed by practicing scientists
- **Fast Publication!** 4 weeks from acceptance to publication

*\*average*

**Subscription** Information about subscribing to *The Journal of Immunology* is online at:  
<http://jimmunol.org/subscription>

**Permissions** Submit copyright permission requests at:  
<http://www.aai.org/About/Publications/JI/copyright.html>

**Email Alerts** Receive free email-alerts when new articles cite this article. Sign up at:  
<http://jimmunol.org/alerts>

## IN THIS ISSUE

- 4275 **DC Bcl-3 Promotes T Cell Priming** *See article p. 4303*  
**Restricted T Cells Promote Pemphigus** *See article p. 4391*  
**Hyperglycemic RAGE** *See article p. 4457*  
**Genetic Variability of Mice and Men** *See article p. 4485*  
**Losing Control in the Mucosa** *See article p. 4527*  
**ELlegant Elongator** *See article p. 4663*

## PILLARS OF IMMUNOLOGY

- 4277 **Antigen Receptor Kinase Two-Step**  
*Lawrence P. Kane*
- 4279 **Pillars Article: Sequential Interactions of the TCR with Two Distinct Cytoplasmic Tyrosine Kinases.** *Science*. 1994. 263: 1136–1139  
*Makio Iwashima, Bryan A. Irving, Nicolai S. C. van Oers, Andrew C. Chan, and Arthur Weiss*

## BRIEF REVIEWS

- 4283 **Thymic Stromal Lymphopoietin and Cancer**  
*Emma Lo Kuan and Steven F. Ziegler*
- 4289 **Origins of  $\gamma\delta$  T Cell Effector Subsets: A Riddle Wrapped in an Enigma**  
*Shawn P. Fahl, Francis Coffey, and David L. Wiest*

## CUTTING EDGE

- 4297 **Cutting Edge: Discrete Functions of mTOR Signaling in Invariant NKT Cell Development and NKT17 Fate Decision**  
*Jun Wei, Kai Yang, and Hongbo Chi*

On the cover: The digital image shows a pancreatic tissue section with inflammatory damage to the pancreatic islet caused by CTLA4 insufficiency in mice on the diabetes-resistant C57BL/6 genetic background. The section was stained with H&E (original magnification  $\times 25$ ). Devarajan, P., J. Miska, J. B. Lui, D. Swieboda, and Z. Chen. 2014. Opposing effects of CTLA4 insufficiency on regulatory versus conventional T cells in autoimmunity converge on effector memory in target tissue. *J. Immunol.* 193: 4368–4380.

*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](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 © 2014 by The American Association of Immunologists, Inc.

## ANTIGEN RECOGNITION AND RESPONSES

- 4303 The NF- $\kappa$ B Regulator Bcl-3 Governs Dendritic Cell Antigen Presentation Functions in Adaptive Immunity  
*Ilaria Tassi, Estefania Claudio, Hongshan Wang, Wanhu Tang, Hye-lin Ha, Sun Saret, Madhu Ramaswamy, Richard Siegel, and Ulrich Siebenlist*
- 4312 Siglecs Induce Tolerance to Cell Surface Antigens by BIM-Dependent Deletion of the Antigen-Reactive B Cells  
*Matthew S. Macauley and James C. Paulson*
- 4322 Different Antigen-Processing Activities in Dendritic Cells, Macrophages, and Monocytes Lead to Uneven Production of HIV Epitopes and Affect CTL Recognition  
*Jens Dinter, Pauline Gourdain, Nicole Y. Lai, Ellen Duong, Edith Bracho-Sanchez, Marijana Rucevic, Paul H. Liebesny, Yang Xu, Mariko Shimada, Musie Ghebremichael, Daniel G. Kavanagh, and Sylvie Le Gall*
- 4335 Human CD141<sup>+</sup> Dendritic Cells Induce CD4<sup>+</sup> T Cells To Produce Type 2 Cytokines  
*Chun I. Yu, Christian Becker, Patrick Metang, Florentina Marches, Yuanyuan Wang, Hori Toshiyuki, Jacques Banchereau, Miriam Merad, and A. Karolina Palucka*

## AUTOIMMUNITY

- 4344 IL-17A Influences Essential Functions of the Monocyte/Macrophage Lineage and Is Involved in Advanced Murine and Human Atherosclerosis  
*Christian Erbel, Mohammadreza Akhavanpoor, Deniz Okuyucu, Susanne Wangler, Alex Dietz, Li Zhao, Konstantinos Stellos, Kristina M. Little, Felix Lasitschka, Andreas Doesch, Maani Hakimi, Thomas J. Dengler, Thomas Giese, Erwin Blessing, Hugo A. Katus, and Christian A. Gleissner*
- 4356 NF- $\kappa$ B-Inducing Kinase in Thymic Stroma Establishes Central Tolerance by Orchestrating Cross-Talk with Not Only Thymocytes but Also Dendritic Cells  
*Yasubiro Mouri, Hitoshi Nishijima, Hiroshi Kawano, Fumiko Hirota, Nobuo Sakaguchi, Junko Morimoto, and Mitsuru Matsumoto*
- 4368 Opposing Effects of CTLA4 Insufficiency on Regulatory versus Conventional T Cells in Autoimmunity Converge on Effector Memory in Target Tissue  
*Priyadharshini Devarajan, Jason Miska, Jen Bon Lui, Dominika Swieboda, and Zhibin Chen*
- 4381 Differential Efficacy of Human Mesenchymal Stem Cells Based on Source of Origin  
*Erin Collins, Fei Gu, Maosong Qi, Ivan Molano, Phillip Ruiz, Lingyun Sun, and Gary S. Gilkeson*
- 4391 Pathogenic IgG Antibodies against Desmoglein 3 in Pemphigus Vulgaris Are Regulated by HLA-DRB1\*04:02-Restricted T Cells  
*Rüdiger Eming, Tina Hennerici, Johan Bäccklund, Claudio Feliciani, Kevin C. Visconti, Sebastian Willenborg, Jessica Wohde, Rikard Holmdahl, Grete Sønderstrup, and Michael Hertl*
- 4400 B Cell-Intrinsic TLR7 Signaling Is Essential for the Development of Spontaneous Germinal Centers  
*Chetna Soni, Eric B. Wong, Phillip P. Domeier, Tahsin N. Khan, Takashi Satoh, Shizuo Akira, and Ziaur S. M. Rahman*
- 4415 Bullous Pemphigoid Autoantibodies Directly Induce Blister Formation without Complement Activation  
*Hideyuki Ujiie, Tetsumasa Sasaoka, Kentaro Izumi, Wataru Nishie, Satoru Shinkuma, Ken Natsuga, Hideki Nakamura, Akihiko Shibaki, and Hiroshi Shimizu*
- 4429 Progression of Relapsing-Remitting Demyelinating Disease Does Not Require Increased TCR Affinity or Epitope Spread  
*Anna E. Kersh, Lindsay J. Edwards, and Brian D. Evavold*
- 4439 A Multiple Sclerosis-Associated Variant of CBLB Links Genetic Risk with Type I IFN Function  
*Klarissa Hanja Stürner, Uwe Borgmeyer, Christian Schulze, Ole Pless, and Roland Martin*

## CLINICAL AND HUMAN IMMUNOLOGY

- 4448 HLA-DR4-Associated T and B Cell Responses to Specific Determinants on the IA-2 Autoantigen in Type 1 Diabetes  
*Kerry A. McLaughlin, Kavita Gulati, Carolyn C. Richardson, Diana Morgan, H. Jonathan Bodansky, Richard G. Felbower, and Michael R. Christie*

## IMMUNE REGULATION

- 4457 Chromatin Decondensation and T Cell Hyperresponsiveness in Diabetes-Associated Hyperglycemia  
*Nuria Martinez, Therese Vallerskog, Kim West, Claudio Nunes-Alves, Jinhee Lee, Gregory W. Martens, Samuel M. Behar, and Hardy Kornfeld*
- 4469 Identification and Clinical Relevance of Naturally Occurring Human CD8<sup>+</sup>HLA-DR<sup>+</sup> Regulatory T Cells  
*Lourdes Arruivito, Florencia Payaslián, Plácida Baz, Ariel Podhorzer, Ariel Billordo, Julieta Pandolfi, Guillermo Semeniuk, Eduardo Arribalzaga, and Leonardo Fainboim*
- 4477 mTORC1-Dependent Metabolic Reprogramming Is a Prerequisite for NK Cell Effector Function  
*Raymond P. Donnelly, Róisín M. Loftus, Sinéad E. Keating, Kevin T. Liou, Christine A. Biron, Clair M. Gardiner, and David K. Finlay*
- 4485 Variation and Genetic Control of Gene Expression in Primary Immunocytes across Inbred Mouse Strains  
*Sara Mostafavi, Adriana Ortiz-Lopez, Molly A. Bogue, Kimie Hattori, Cristina Pop, Daphne Koller, Diane Mathis, Christophe Benoist, and The Immunological Genome Consortium*

## IMMUNOGENETICS

- 4497 HLA-DQ Molecules as Affinity Matrix for Identification of Gluten T Cell Epitopes  
*Siri Dørum, Michael Bodd, Lars-Egil Fallang, Elin Bergseng, Asbjørn Christophersen, Marie K. Johannesen, Shuo-Wang Qiao, Jorunn Stamnaes, Gustavo A. de Souza, and Ludvig M. Sollid*

## IMMUNOTHERAPY AND VACCINES

- 4507 Vizantin Inhibits Endotoxin-Mediated Immune Responses via the TLR 4/MD-2 Complex  
*Masataka Oda, Hirofumi Yamamoto, Masahiro Shibutani, Mayo Nakano, Kenta Yabiku, Takafumi Tarui, Naoya Kameyama, Daiki Shirakawa, Sumiyo Obayashi, Naoyuki Watanabe, Hiroshi Nakase, Midori Suenaga, Yoichi Matsunaga, Masahiro Nagahama, Hironobu Takahashi, Hiroshi Imagawa, Mie Kurosawa, Yutaka Terao, Mugio Nishizawa, and Jun Sakurai*

## INFECTIOUS DISEASE AND HOST RESPONSE

- 4515 Extracellular UDP and P2Y<sub>6</sub> Function as a Danger Signal To Protect Mice from Vesicular Stomatitis Virus Infection through an Increase in IFN- $\beta$  Production  
*Ruimei Li, Binghe Tan, Yan Yan, Xiaobin Ma, Na Zhang, Zhi Zhang, Mingyao Liu, Min Qian, and Bing Du*
- 4527 Diminished Viral Control during Simian Immunodeficiency Virus Infection Is Associated with Aberrant PD-1<sup>hi</sup> CD4<sup>+</sup> T Cell Enrichment in the Lymphoid Follicles of the Rectal Mucosa  
*Geetha H. Mylvaganam, Vijayakumar Velu, Jung-Joo Hong, Shanmugalakshmi Sadagopal, Suefen Kwa, Rahul Basu, Benton Lawson, Francois Villinger, and Rama Rao Amara*
- 4537 *Mycobacterium tuberculosis* Decreases Human Macrophage IFN- $\gamma$  Responsiveness through miR-132 and miR-26a  
*Bin Ni, Murugesan V. S. Rajaram, William P. Lafuse, Michelle B. Landes, and Larry S. Schlesinger*
- 4548 Inflammasome Activation by *Campylobacter jejuni*  
*Lieneke I. Bouwman, Marcel R. de Zoete, Nancy M. C. Bleumink-Pluym, Richard A. Flavell, and Jos P. M. van Putten*
- 4558 miR-15a/16 Regulates Macrophage Phagocytosis after Bacterial Infection  
*Hyung-Geun Moon, Jincheng Yang, Yijie Zheng, and Yang Jin*

## INNATE IMMUNITY AND INFLAMMATION

- 4568 Mast Cells Control the Expansion and Differentiation of IL-10-Competent B Cells  
*Francesca Mion, Federica D'Inca, Luca Danelli, Barbara Toffoletto, Carla Guarnotta, Barbara Frossi, Alessia Burocchi, Alice Rigoni, Norbert Gerdes, Esther Lutgens, Claudio Tripodo, Mario P. Colombo, Juan Rivera, Gaetano Vitale, and Carlo E. Pucillo*
- 4580 Recognition of Lysophosphatidylcholine by Type II NKT Cells and Protection from an Inflammatory Liver Disease  
*Igor Maricic, Enrico Girardi, Dirk M. Zajonc, and Vipin Kumar*

- 4590 Complement Opsonization of HIV-1 Results in Decreased Antiviral and Inflammatory Responses in Immature Dendritic Cells via CR3  
*Rada Ellegård, Elisa Crisci, Adam Burgener, Christopher Sjöwall, Kenzie Birse, Garrett Westmacott, Jorma Hinkula, Jeffrey D. Lifson, and Marie Larsson*
- 4602 IL-22 Fate Reporter Reveals Origin and Control of IL-22 Production in Homeostasis and Infection  
*Helena Ahlfors, Peter J. Morrison, João H. Duarte, Ying Li, Judit Biro, Mauro Tolaini, Paola Di Meglio, Alexandre J. Potocnik, and Brigitta Stockinger*
- 4614 Lipin-1 Integrates Lipid Synthesis with Proinflammatory Responses during TLR Activation in Macrophages  
*Clara Meana, Lucía Peña, Gema Lordén, Esperanza Esquinas, Carlos Guijas, Martín Valdearcos, Jesús Balsinde, and María A. Balboa*
- 4623 Neutrophils Counteract Autophagy-Mediated Anti-Inflammatory Mechanisms in Alveolar Macrophage: Role in Posthemorrhagic Shock Acute Lung Inflammation  
*Zongmei Wen, Liyan Fan, Yuehua Li, Zui Zou, Melanie J. Scott, Guozhi Xiao, Song Li, Timothy R. Billiar, Mark A. Wilson, Xueyin Shi, and Jie Fan*
- 4634 Intrinsic Self-DNA Triggers Inflammatory Disease Dependent on STING  
*Jeonghyun Ahn, Phillip Ruiz, and Glen N. Barber*
- 4643 Innate Inflammation Induced by the 8-Oxoguanine DNA Glycosylase-1–KRAS–NF- $\kappa$ B Pathway  
*Leopoldo Aguilera-Aguirre, Attila Bacsi, Zsolt Radak, Tapas K. Hazra, Sankar Mitra, Sanjiv Sur, Allan R. Brasier, Xueqing Ba, and Istvan Boldogh*

## MOLECULAR AND STRUCTURAL IMMUNOLOGY

- 4654 Requirement for *Ssbp2* in Hematopoietic Stem Cell Maintenance and Stress Response  
*June Li, Yasuhiro Kurasawa, Yang Wang, Karen Clise-Dwyer, Sherry A. Klumpp, Hong Liang, Ramesh C. Taylor, Aaron C. Raymond, Zeev Estrov, Stephen J. Brandt, Richard E. Davis, Patrick Zweidler-McKay, Hesham M. Amin, and Lalitha Nagarajan*
- 4663 Transcription Elongation Factor ELL2 Drives Ig Secretory-Specific mRNA Production and the Unfolded Protein Response  
*Kyung Soo Park, Ian Bayles, Alec Szlachta-McGinn, Joshua Paul, Julie Boiko, Patricia Santos, June Liu, Zhou Wang, Lisa Borghesi, and Christine Milcarek*
- 4675 The AP-2 Clathrin Adaptor Mediates Endocytosis of an Inhibitory Killer Cell Ig-like Receptor in Human NK Cells  
*Amanda K. Purdy, Diana A. Alvarez Arias, Jennifer Oshinsky, Ashley M. James, Ilya Serebriiskii, and Kerry S. Campbell*

## MUCOSAL IMMUNOLOGY

- 4684 Dynamic Changes in Macrophage Activation and Proliferation during the Development and Resolution of Intestinal Inflammation  
*Matthew C. Little, Rebecca J. M. Hurst, and Kathryn J. Else*

## TRANSPLANTATION

- 4696 Combining Autologous Dendritic Cell Therapy with CD3 Antibodies Promotes Regulatory T Cells and Permanent Islet Allograft Acceptance  
*Marije C. Baas, Chantal Kuhn, Fabrice Valette, Claire Mangez, Mercedes Segovia Duarte, Marcelo Hill, Alix Besançon, Lucienne Chatenoud, Maria-Cristina Cuturi, and Sylvaine You*

## TUMOR IMMUNOLOGY

- 4704 Functional Avidity-Driven Activation-Induced Cell Death Shapes CTL Immunodominance  
*Silvia Dalla Santa, Anna Merlo, Sara Bobisse, Elisa Ronconi, Daniela Boldrin, Gabriella Milan, Vito Barbieri, Oriano Marin, Antonella Facchinetti, Giovanni Biasi, Riccardo Dolcetti, Paola Zanovello, and Antonio Rosato*
- 4712 Dual Role of the Leukocyte Integrin  $\alpha_M\beta_2$  in Angiogenesis  
*Dmitry A. Soloviev, Stanley L. Hazen, Dorota Szpak, Kamila M. Bledzka, Christie M. Ballantyne, Edward F. Plow, and Elzbieta Pluskota*

- 4722 Effective Innate and Adaptive Antimelanoma Immunity through Localized TLR7/8 Activation  
*Manisha Singh, Hiep Khong, Zhimin Dai, Xue-Fei Huang, Jennifer A. Wargo, Zachary A. Cooper, John P. Vasilakos, Patrick Hwu, and Willem W. Overwijk*

## NOVEL IMMUNOLOGICAL METHODS

- 4732 A Novel Mouse Model for the Hyper-IgM Syndrome: A Spontaneous Activation-Induced Cytidine Deaminase Mutation Leading to Complete Loss of Ig Class Switching and Reduced Somatic Hypermutation  
*Carin I. M. Dahlberg, Minghui He, Torkild Visnes, Magda Liz Torres, Elena M. Cortizas, Ramiro E. Verdun, Lisa S. Westerberg, Eva Severinson, and Lena Ström*
- 4739 A Novel Method Using Blinatumomab for Efficient, Clinical-Grade Expansion of Polyclonal T Cells for Adoptive Immunotherapy  
*Josée Golay, Anna D'Amico, Gianmaria Borleri, Michela Bonzi, Rut Valgardsdottir, Rachele Alzani, Sabrina Cribioli, Clara Albanese, Enrico Pesenti, Maria Chiara Finazzi, Giulia Quaresmini, Dirk Nagorsen, Martino Introna, and Alessandro Rambaldi*

## CORRECTIONS

- 4748 Correction: Generation and Differentiation of IL-17–Producing CD4<sup>+</sup> T Cells in Malignant Pleural Effusion  
*Zhi-Jian Ye, Qiong Zhou, Yong-Yao Gu, Shou-Ming Qin, Wan-Li Ma, Jian-Bao Xin, Xiao-Nan Tao, and Huan-Zhong Shi*
- 4749 Correction: A Reporter Mouse Reveals Lineage-Specific and Heterogeneous Expression of IRF8 during Lymphoid and Myeloid Cell Differentiation  
*Hongsheng Wang, Ming Yan, Jiafang Sun, Shweta Jain, Ryusuke Yoshimi, Sanaz Momben Abolfath, Keiko Ozato, William G. Coleman, Jr., Ashley P. Ng, Donald Metcalf, Ladina DiRago, Stephen L. Nutt, and Herbert C. Morse, III*

- 4750 AUTHOR INDEX