



Explore Spatial Biology Without Limits  
Introducing the Next Generation of Precise Spatial Multiplexing

Meet CellScope™



202 (9)

*J Immunol* 2019; 202:2515-2817; ;  
<http://www.jimmunol.org/content/202/9>

This information is current as  
of May 19, 2022.

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>

*The Journal of Immunology* is published twice each month by  
The American Association of Immunologists, Inc.,  
1451 Rockville Pike, Suite 650, Rockville, MD 20852  
All rights reserved.  
Print ISSN: 0022-1767 Online ISSN: 1550-6606.



## IN THIS ISSUE

- 2515 **Affinity in Action** *See article p. 2535*  
**Epitope Editing Affects T Cell Responses in Celiac Disease** *See article p. 2558*  
**Skin Wounding Sparks Monocytes** *See article p. 2720*  
**Deep Dive into Dimethyl Fumarate** *See article p. 2737*  
**Early Immune Cascade of Pulmonary Fibrosis** *See article p. 2760*  
**CTLA-4: The Next Target in Chronic Lymphocytic Leukemia?** *See article p. 2806*

## PILLARS OF IMMUNOLOGY

- 2517 Unmasking the Mysteries of MYC  
*Rajeev M. Nepal and Alberto Martin*

## BRIEF REVIEWS

- 2519 Friend or Foe: The Protective and Pathological Roles of Inducible Bronchus-Associated Lymphoid Tissue in Pulmonary Diseases  
*Nancy D. Marin, Micah D. Dunlap, Deepak Kaushal, and Shabaana A. Khader*

## CUTTING EDGE

- 2529 Cutting Edge: BCAP Promotes Lupus-like Disease and TLR-Mediated Type I IFN Induction in Plasmacytoid Dendritic Cells  
*Talyn Chu, Minjian Ni, Chunmo Chen, Shreeram Akilesb, and Jessica A. Hamerman*

## ANTIGEN RECOGNITION AND RESPONSES

- 2535 TCR Affinity Biases Th Cell Differentiation by Regulating CD25, Eef1e1, and Gbp2  
*Dmitri I. Kotov, Jason S. Mitchell, Thomas Pengo, Christiane Ruedl, Sing Sing Way, Ryan A. Langlois, Brian T. Fife, and Marc K. Jenkins*

On the cover: Identification of mononuclear phagocyte populations in the newborn lung.  $t$ -Distributed Stochastic Neighbor Embedding was used to display multidimensional flow cytometry data and characterize alveolar macrophages (pink), Ly-6C<sup>hi</sup> interstitial monocytes/macrophages (blue), Ly-6C<sup>lo</sup> interstitial monocytes/macrophages (purple), and dendritic cells (green) in lungs from PN1 mice exposed to hyperoxia for 24 h. Eldredge, L. C., R. S. Creasy, S. Tanaka, J.-F. Lai, and S. F. Ziegler. 2019. Imbalance of Ly-6C<sup>hi</sup> and Ly-6C<sup>lo</sup> monocytes/macrophages worsens hyperoxia-induced lung injury and is rescued by IFN- $\gamma$ . *J. Immunol.* 202: 2772–2781.

*The Journal of Immunology* (ISSN 0022-1767) is published twice each month by The American Association of Immunologists, Inc., 1451 Rockville Pike, Suite 650, Rockville, MD 20852, Phone: 301-634-7197, Fax: 301-246-8401. Subscription terms: New subscriptions and renewals begin January 1 and expire one year later (see <http://www.jimmunol.org/subscription> 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/Subscription/Claims>). Reprints of individual articles are available only from authors. Periodicals postage paid at Rockville, MD 20852, 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, 1451 Rockville Pike, Suite 650, Rockville, MD 20852. Copyright © 2019 by The American Association of Immunologists, Inc.

- 2546 Essential Role of NADPH Oxidase–Dependent Production of Reactive Oxygen Species in Maintenance of Sustained B Cell Receptor Signaling and B Cell Proliferation  
*Yang-Yang Feng, Miao Tang, Mitsuhiro Suzuki, Chinthika Gunasekara, Yuki Anbe, Yuichi Hiraoka, Jun Liu, Helmut Grasberger, Mamoru Obkita, Yasuo Matsumura, Ji-Yang Wang, and Takeshi Tsubata*

- 2558 Epitope Selection for HLA-DQ2 Presentation: Implications for Celiac Disease and Viral Defense  
*Shu-Chen Hung, Tieying Hou, Wei Jiang, Nan Wang, Shuo-Wang Qiao, I-Ting Chow, Xiaodan Liu, Sjoerd H. van der Burg, David M. Koelle, William W. Kwok, Ludvig M. Sollid, and Elizabeth D. Mellins*

## AUTOIMMUNITY

- 2570 Nanoparticles Bearing TSH Receptor Protein and a Tolerogenic Molecule Do Not Induce Immune Tolerance but Exacerbate Thyroid Autoimmunity in hTSHR/NOD.H2<sup>b4</sup> Mice  
*Sandra M. McLachlan, Holly A. Aliesky, and Basil Rapoport*

## CLINICAL AND HUMAN IMMUNOLOGY

- 2578 Expanded CD14<sup>hi</sup>CD16<sup>-</sup> Immunosuppressive Monocytes Predict Disease Severity in Patients with Acute Pancreatitis  
*Ruling Zhang, Juanjuan Shi, Rulin Zhang, Jianbo Ni, Aida Habtezion, Xingpeng Wang, Guoyong Hu, and Jing Xue*
- 2585 Effector and Activated T Cells Induce Preterm Labor and Birth That Is Prevented by Treatment with Progesterone  
*Marcia Arenas-Hernandez, Roberto Romero, Yi Xu, Bogdan Panaitescu, Valeria Garcia-Flores, Derek Miller, Hyunyoung Ahn, Bogdan Done, Sonia S. Hassan, Chaur-Dong Hsu, Adi L. Tarca, Carmen Sanchez-Torres, and Nardhy Gomez-Lopez*
- 2609 Cholecystokinin Downregulates Psoriatic Inflammation by Its Possible Self-Regulatory Effect on Epidermal Keratinocytes  
*Atsuko Funakoshi, Kazuki Tatsuno, Takatoshi Shimauchi, Toshiharu Fujiyama, Taisuke Ito, and Yoshiki Tokura*

## IMMUNE REGULATION

- 2616 Stromal Interaction Molecule Deficiency in T Cells Promotes Spontaneous Follicular Helper T Cell Development and Causes Type 2 Immune Disorders  
*Masatsugu Oh-hora, Xiuyuan Lu, Moe Shiokawa, Hiroshi Takayanagi, and Sho Yamasaki*
- 2628 Negligible Role for Deletion Mediated by cDC1 in CD8<sup>+</sup> T Cell Tolerance  
*Brendan W. MacNabb, Douglas E. Kline, Annie R. Albright, Xiufen Chen, Daniel S. Leventhal, Peter A. Savage, and Justin Kline*

## IMMUNOGENETICS

- 2636 Diversity of KIR, HLA Class I, and Their Interactions in Seven Populations of Sub-Saharan Africans  
*Neda Nemat-Gorgani, Lisbeth A. Guethlein, Brenna M. Henn, Steven J. Norberg, Jacques Chiaroni, Martin Sikora, Lluís Quintana-Murci, Joanna L. Mountain, Paul J. Norman, and Peter Parham*

## INFECTIOUS DISEASE AND HOST RESPONSE

- 2648 Identification and Characterization of Functional Human Monoclonal Antibodies to *Plasmodium vivax* Duffy-Binding Protein  
*Lenore L. Carias, Sebastien Dechavanne, Vanessa C. Nicolette, Sokunthea Sreng, Seila Suon, Chanaki Amaratunga, Rick M. Fairhurst, Celia Dechavanne, Samantha Barnes, Benoit Witkowski, Jean Popovici, Camille Roesch, Edwin Chen, Marcelo U. Ferreira, Niraj H. Tolia, John H. Adams, and Christopher L. King*
- 2661 Dragocytosis: Elucidation of the Mechanism for *Cryptococcus neoformans* Macrophage-to-Macrophage Transfer  
*Quigly Dragotakes, Man Shun Fu, and Arturo Casadevall*

- 2671 *Brucella abortus* Cyclic Dinucleotides Trigger STING-Dependent Unfolded Protein Response That Favors Bacterial Replication  
Erika S. Guimarães, Marco Túlio R. Gomes, Priscila C. Campos, Daniel S. Mansur, Adara A. dos Santos, Jerome Harms, Gary Splitter, Judith A. Smith, Glen N. Barber, and Sergio C. Oliveira
- 2682 Shifting Dynamics of Intestinal Macrophages during Simian Immunodeficiency Virus Infection in Adult Rhesus Macaques  
Naofumi Takahashi, Chie Sugimoto, Carolina Allers, Xavier Alvarez, Woong-Ki Kim, Elizabeth S. Didier, and Marcelo J. Kuroda
- 2690 Systemic Antibiotic Therapy Reduces Circulating Inflammatory Dendritic Cells and Treg–Th17 Plasticity in Periodontitis  
Mythilypriya Rajendran, Stephen Looney, Nagendra Singh, Mahmoud Elashiry, Mohamed M. Meghil, Ahmed R. El-Awady, Omnia Taufik, Cristiano Susin, Roger M. Arce, and Christopher W. Cutler

## INNATE IMMUNITY AND INFLAMMATION

- 2700 Distinctive Effects of GM-CSF and M-CSF on Proliferation and Polarization of Two Major Pulmonary Macrophage Populations  
Christina Draijer, Loka Raghu Kumar Penke, and Marc Peters-Golden
- 2710 Identification of Residues Critical for FPR2 Activation by the Cryptic Peptide Mitocryptide-2 Originating from the Mitochondrial DNA–Encoded Cytochrome *b*  
Simon Lind, Michael Gabl, André Holdfeldt, Jonas Mårtensson, Martina Sundqvist, Kodai Nishino, Claes Dahlgren, Hidehito Mukai, and Huamei Forsman
- 2720 Skin Wounding–Induced Monocyte Expansion in Mice Is Not Abrogated by IL-1 Receptor 1 Deficiency  
Pijus K. Barman, Jingbo Pang, Norifumi Urao, and Timothy J. Koh
- 2728 Leptin Promotes Monosodium Urate Crystal–Induced Inflammation in Human and Murine Models of Gout  
Yiyun Yu, Jie Yang, Sisi Fu, Yu Xue, Minrui Liang, Dandan Xuan, Xiaoxia Zhu, Weiguo Wan, Ling Lv, and Hejian Zou
- 2737 Dimethyl Fumarate Disrupts Human Innate Immune Signaling by Targeting the IRAK4–MyD88 Complex  
Balyn W. Zaro, Ekaterina V. Vinogradova, Daniel C. Lazar, Megan M. Blewett, Radu M. Suci, Junichiro Takaya, Sean Studer, Juan Carlos de la Torre, Jean-Laurent Casanova, Benjamin F. Cravatt, and John R. Teijaro
- 2747 The Immune Deficiency Pathway Regulates Metabolic Homeostasis in *Drosophila*  
Saeideh Davoodi, Anthony Galenza, Andrew Panteluk, Rujuta Deshpande, Meghan Ferguson, Savraj Grewal, and Edan Foley
- 2760 Epithelial Expression of an Interstitial Lung Disease–Associated Mutation in Surfactant Protein-C Modulates Recruitment and Activation of Key Myeloid Cell Populations in Mice  
Alessandro Venosa, Jeremy Katzen, Yaniv Tomer, Meghan Kopp, Sarita Jamil, Scott J. Russo, Surafel Mulugeta, and Michael F. Beers
- 2772 Imbalance of Ly-6C<sup>hi</sup> and Ly-6C<sup>lo</sup> Monocytes/Macrophages Worsens Hyperoxia-Induced Lung Injury and Is Rescued by IFN- $\gamma$   
Laurie C. Eldredge, Rane S. Creasy, Shigeru Tanaka, Jen-Feng Lai, and Steven F. Ziegler

## MOLECULAR AND STRUCTURAL IMMUNOLOGY

- 2782 Integrin  $\beta$ 1 Promotes the Interaction of Murine IgG3 with Effector Cells  
Carolyn Saylor Hawk, Carolina Coelho, Diane Stéfany Lima de Oliveira, Verence Paredes, Patrícia Albuquerque, Anamélia Lorenzetti Bocca, Ananésia Correa dos Santos, Victoria Rusakova, Heather Holemon, Ildinete Silva-Pereira, Maria Sueli Soares Felipe, Hideo Yagita, André Moraes Nicola, and Arturo Casadevall

## TRANSPLANTATION

- 2795 Dendritic Cell Expression of Retinal Aldehyde Dehydrogenase-2 Controls Graft-versus-Host Disease Lethality  
*Govindarajan Thangavelu, Yu-Chi Lee, Michael Loschi, K. Melanie Schaechter, Colby J. Feser, Brent H. Koehn, Elizabeth C. Nowak, Robert Zeiser, Jonathan S. Serody, William J. Murphy, David H. Munn, Pierre Chambon, Randolph J. Noelle, and Bruce R. Blazar*

## TUMOR IMMUNOLOGY

- 2806 Leukemic B Cell CTLA-4 Suppresses Costimulation of T Cells  
*Priscilla Do, Kyle A. Beckwith, Carolyn Cheney, Minh Tran, Larry Beaver, Brittany G. Griffin, Xiaokui Mo, Yang Liu, Rosa Lalpalombella, Erin Hertlein, Natarajan Muthusamy, and John C. Byrd*

## CORRECTIONS

- 2817 Correction: Abrogation of Lupus Nephritis in Somatic Hypermutation–Deficient B6.MRL-Fas<sup>lpr</sup>/J Mice  
*Fengqi Hao, Miaomiao Tian, Yunpeng Feng, Chao Quan, Yixi Chen, Shuai Chen, and Min Wei*

- 2818 AUTHOR INDEX