

VOL. 209 | NO. 3 | August 1, 2022 | Pages 429–642

TOP READS

- 429 **Th22 Cells in HIV-TB Coinfection** *See article p. 446*
Nanoparticle Therapy for Type I Diabetes *See article p. 465*
TIGIT-Fc-LIGHT Battles Solid Tumors *See article p. 510*
Vaccine-Induced Correlates of Protection from HIV *See article p. 526*
Humanized Melanoma Mouse Model *See article p. 606*

PILLARS OF IMMUNOLOGY

- 431 Nucleic Acid Sensing and Systemic Lupus Erythematosus: The Danger of Self
Yong-Rui Zou and Anne Davidson

CLINICAL AND HUMAN IMMUNOLOGY

- 435 TOLLIP Optimizes Dendritic Cell Maturation to Lipopolysaccharide and *Mycobacterium tuberculosis*
Sambasivan Venkatasubramanian, Robyn Pryor, Courtney Plumlee, Sarah B. Cohen, Jason D. Simmons, Alexander J. Warr, Andrew D. Graustein, Aparajita Saba, Thomas R. Hawn, Kevin B. Urdahl, and Javeed A. Shah
- 446 Characterization of *Mycobacterium tuberculosis*-Specific Th22 Cells and the Effect of Tuberculosis Disease and HIV Coinfection
Mohau S. Makatsa, F. Millicent A. Omondi, Rubina Bunjun, Robert J. Wilkinson, Catherine Riou, and Wendy A. Burgers

IMMUNE REGULATION

- 456 Carma3 Protects from Liver Injury by Preserving Mitochondrial Integrity in Liver Sinusoidal Endothelial Cells
Liqing Cheng, Zhanqi Wei, Zaopeng Yang, Renlin Lu, Ming Yang, Muchun Yu, Naixue Yang, Shulin Li, Mingyi Gao, Xueqiang Zhao, and Xin Lin

On the cover: Intravital imaging of the liver vascular structure via i.v. injection of anti-CD31 fluorescence Ab (red) and FITC-labeled Con A (green). Cheng, L., Z. Wei, Z. Yang, R. Lu, M. Yang, M. Yu, N. Yang, S. Li, M. Gao, X. Zhao, and X. Lin. 2022. Carma3 protects from liver injury by preserving mitochondrial integrity in liver sinusoidal endothelial cells. *J. Immunol.* 209: 456–464.

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 © 2022 by The American Association of Immunologists, Inc.

- 465 Tolerogenic Immune-Modifying Nanoparticles Encapsulating Multiple Recombinant Pancreatic β Cell Proteins Prevent Onset and Progression of Type 1 Diabetes in Nonobese Diabetic Mice
Joseph R. Podojil, Samantha Genardi, Ming-Yi Chiang, Sandeep Kakade, Tobias Neef, Tuskar Murthy, Michael T. Boyne, II, Adam Elhofy, and Stephen D. Miller
- 476 Deacetylation of K481 and K484 on Penaeid Shrimp Hemocyanin Is Critical for Antibacterial Activity
Junjie Nie, Jude Juventus Aweya, Zhixue Yu, Hui Zhou, Fan Wang, Defu Yao, Zhibong Zheng, Shengkang Li, Hongyu Ma, and Yueling Zhang
- 488 The *Brucella* Effector BspI Suppresses Inflammation via Inhibition of IRE1 Kinase Activity during *Brucella* Infection
Chen Li, Jingyu Wang, Wanchun Sun, Xiaofeng Liu, Jun Wang, and Qisheng Peng

IMMUNE SYSTEM DEVELOPMENT

- 498 A Novel CD135⁺ Subset of Mouse Monocytes with a Distinct Differentiation Pathway and Antigen-Presenting Properties
Naoka Kamio, Asumi Yokota, Yuichi Tokuda, Chie Ogasawara, Masakazu Nakano, Miki Nagao, Kei Tashiro, Taira Maekawa, Nobuyuki Onai, and Hideyo Hirai

IMMUNOTHERAPY AND VACCINES

- 510 LIGHT (TNFSF14) Costimulation Enhances Myeloid Cell Activation and Antitumor Immunity in the Setting of PD-1/PD-L1 and TIGIT Checkpoint Blockade
Kyung Jin Yoo, Kellsey Johannes, Louis E. González, Arpita Patel, Casey W. Shuptrine, Zachary Opheim, Karen Lenz, Kristen Campbell, Thuy-Ai Nguyen, Jayalakshmi Miriyala, Connor Smith, Ashlyn McGuire, Yi-Hsuan Tsai, Fatima Rangwala, Suresh de Silva, Taylor H. Schreiber, and George Fromm
- 526 Th2-Biased Transcriptional Profile Predicts HIV Envelope-Specific Polyfunctional CD4⁺ T Cells That Correlated with Reduced Risk of Infection in RV144 Trial
Kristen W. Cohen, Yuan Tian, Casey Thayer, Aaron Seese, Robert Amezcua, M. Juliana McElrath, Stephen C. De Rosa, and Raphael Gottardo

INFECTIOUS DISEASE AND HOST RESPONSE

- 535 A Baseline Cellular Antiviral State Is Maintained by cGAS and Its Most Frequent Naturally Occurring Variant rs610913
Julia Kazmierski, Carina Elsner, Katinka Döhner, Shuting Xu, Aurélie Ducroux, Fabian Pott, Jenny Jansen, Christian W. Thorball, Ole Zeymer, Xiaoyi Zhou, Roman Fedorov, Jacques Fellay, Markus W. Löffler, Alexander N. R. Weber, Beate Sodeik, and Christine Goffinet
- 548 Differential Roles for IL-1 α and IL-1 β in *Pseudomonas aeruginosa* Corneal Infection
Bridget Ratitong, Michaela E. Marshall, Morgan A. Dragan, Charissa M. Anunciado, Serena Abbondante, and Eric Pearlman

INNATE IMMUNITY AND INFLAMMATION

- 559 A Vitamin D–RelB/NF- κ B Pathway Limits Chandipura Virus Multiplication by Rewiring the Homeostatic State of Autoregulatory Type 1 IFN–IRF7 Signaling
Yashika Ratra, Naveen Kumar, Manti K. Saba, Chandrima Bharadwaj, Chen Chongtham, Sachendra S. Bais, Guruprasad Medigeshi, Gopalakrishnan A. Arimbasseri, and Soumen Basak
- 569 ICAM-1 Abundance Is Increased in Pancreatic Islets of Hyperglycemic Female NOD Mice and Is Rapidly Upregulated by NF- κ B in Pancreatic β -Cells
Thomas M. Martin, Susan J. Burke, Heidi M. Batdorf, David H. Burk, Sujoy Ghosh, Samuel D. Dupuy, Michael D. Karlstad, and J. Jason Collier
- 582 Heat Shock Protein 70 Is a Damage-Associated Molecular Pattern That by Binding to Lipopolysaccharide and β -1,3-Glucan–Binding Protein Activates the Prophenoloxidase System in Shrimp
Wisarut Junprung, Premruethai Supungul, Nutthapon Sangklai, and Anchalee Tassanakajon

MOLECULAR AND STRUCTURAL IMMUNOLOGY

- 593 Affinity-Driven Site-Specific High Mannose Modification Determines the Structural Polymerization and Function of Tetrameric IgM in a Primitive Vertebrate
Xiaoxue Yin, Xiaoyu Li, Liangliang Mu, Hao Bai, Yanjian Yang, Nuo Chen, Liting Wu, Shengli Fu, Jun Li, Wantao Ying, and Jianmin Ye

TUMOR IMMUNOLOGY

- 606 An In Vivo Model of Human Macrophages in Metastatic Melanoma
Valentin Voillet, Trisha R. Berger, Kelly M. McKenna, Kelly G. Paulson, Wei Hong Tan, Kimberly S. Smythe, Daniel S. Hunter, William J. Valente, Stephanie Weaver, Jean S. Campbell, Teresa S. Kim, David R. Byrd, Jason H. Bielas, Robert H. Pierce, Aude G. Chapuis, Raphaël Gottardo, and Anthony Rongvaux
- 621 PPP2R2D Suppresses Effector T Cell Exhaustion and Regulatory T Cell Expansion and Inhibits Tumor Growth in Melanoma
Wenliang Pan, Marc Scherlinger, Nobuya Yoshida, Maria G. Tsokos, and George C. Tsokos
- 629 Combination of NKG2A and PD-1 Blockade Improves Radiotherapy Response in Radioresistant Tumors
Nicholas G. Battaglia, Joseph D. Murphy, Taylor P. Uccello, Angela Hughson, Nicholas W. Gavras, Johnathan J. Caldon, Scott A. Gerber, and Edith M. Lord
- 641 **AUTHOR INDEX**