

Luminex
complexity simplified.



Reimagine your discoveries

Amnis[®] ImageStream[®]X Mk II and
FlowSight[®] Imaging Flow Cytometers

Learn more >



198 (10)

J Immunol 2017; 198:3763-4177; ;
<http://www.jimmunol.org/content/198/10>

This information is current as
of March 8, 2021.

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

- 3763 **The Impact of Secondhand Smoke Exposure: It Runs in the Family** *See article p. 3815*
RGC-32 Regulates Th17 Responses *See article p. 3869*
Cell Cycle Progress Is Gone in B Cells Lacking GON4L *See article p. 3978*
Targeting Tumor-Localized Myeloid Cells *See article p. 4166*

IMMUNOLOGY NOTES AND RESOURCES

- 3765 High-Throughput Immunogenetics for Clinical and Research Applications in Immunohematology: Potential and Challenges
Anton W. Langerak, Monika Brüggemann, Frédéric Davi, Nikos Darzentas, Jacques J. M. van Dongen, David Gonzalez, Gianni Cazzaniga, Véronique Giudicelli, Marie-Paule Lefranc, Mathieu Giraud, Elizabeth A. Macintyre, Michael Hummel, Christiane Pott, Patricia J. T. A. Groenen, Kostas Stamatopoulos, and the EuroClonality-NGS Consortium
- 3775 A Consensus Definitive Classification of Scavenger Receptors and Their Roles in Health and Disease
Mercy R. PrabhuDas, Cynthia L. Baldwin, Paul L. Bollyky, Dawn M. E. Bowdish, Kurt Drickamer, Maria Febbraio, Joachim Herz, Lester Kobzik, Monty Krieger, John Loike, Benita McVicker, Terry K. Means, Soren K. Moestrup, Steven R. Post, Tatsuya Sawamura, Samuel Silverstein, Robert C. Speth, Janice C. Telfer, Geoffrey M. Thiele, Xiang-Yang Wang, Samuel D. Wright, and Joseph El Khoury

BRIEF REVIEWS

- 3791 Innate Control of Adaptive Immunity: Beyond the Three-Signal Paradigm
Aakanksha Jain and Chandrashekhar Pasare

CUTTING EDGE

- 3803 Cutting Edge: Increased Autoimmunity Risk in Glycogen Storage Disease Type 1b Is Associated with a Reduced Engagement of Glycolysis in T Cells and an Impaired Regulatory T Cell Function
Daniela Melis, Fortunata Carbone, Giorgia Minopoli, Claudia La Rocca, Francesco Perna, Veronica De Rosa, Mario Galgani, Generoso Andria, Giancarlo Parenti, and Giuseppe Matarese

On the cover: Dual immunofluorescence of decidua basalis: macrophages CD163⁺ (green) express CCR1 receptor (red). CCR1 is a receptor for the chemokine CCL14 and this interaction may be important in regulating leukocyte infiltration into spiral arterioles during early remodeling. Choudhury, R. H., C. E. Dunk, S. J. Lye, J. D. Aplin, L. K. Harris, and R. L. Jones. 2017. Extravillous trophoblast and endothelial cell crosstalk mediates leukocyte infiltration to the early remodeling decidual spiral arteriole wall. *J. Immunol.* 198: 4115–4128.

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: 301-634-7829. 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 © 2017 by The American Association of Immunologists, Inc.

- 3809 Cutting Edge: Selective Oral ROCK2 Inhibitor Reduces Clinical Scores in Patients with Psoriasis Vulgaris and Normalizes Skin Pathology via Concurrent Regulation of IL-17 and IL-10
Alexandra Zanin-Zhorov, Jonathan M. Weiss, Alissa Trzeciak, Wei Chen, Jingya Zhang, Melanie S. Nyuydzefe, Carmen Arencibia, Seetharam Polimera, Olivier Schueller, Judilyn Fuentes-Duculan, Kathleen M. Bonifacio, Norma Kunjraiva, Inna Cueto, Jennifer Soung, Roy M. Fleischmann, Alan Kivitz, Mark Lebwohl, Margarita Nunez, Johnnie Woodson, Shondra L. Smith, Robert F. West, Mark Berger, James G. Krueger, John L. Ryan, and Samuel D. Waksal

ALLERGY AND OTHER HYPERSENSITIVITIES

- 3815 Gestational Exposure to Sidestream (Secondhand) Cigarette Smoke Promotes Transgenerational Epigenetic Transmission of Exacerbated Allergic Asthma and Bronchopulmonary Dysplasia
Shashi P. Singh, Hitendra S. Chand, Raymond J. Langley, Neerad Mishra, Ted Barrett, Karin Rudolph, Carmen Tellez, Piotr T. Filipczak, Steve Belinsky, Ali I. Saeed, Aryaz Sheybani, Vernat Exil, Hemant Agarwal, Venkataramana K. Sidhaye, Thomas Sussan, Shyam Biswal, and Mohan Sopori
- 3823 Blocking Allergic Reaction through Targeting Surface-Bound IgE with Low-Affinity Anti-IgE Antibodies
Ke Zhang, Jeffrey Liu, Thao Truong, Elyssa Zukin, Wendy Chen, and Andrew Saxon

ANTIGEN RECOGNITION AND RESPONSES

- 3835 Varied Role of Ubiquitylation in Generating MHC Class I Peptide Ligands
Jiajie Wei, Damien Zanker, Anthony R. Di Carluccio, Margery G. Smelkinson, Kazuyo Takeda, Mina O. Seedhom, Devin Dersh, James S. Gibbs, Ning Yang, Ajit Jadhav, Weisan Chen, and Jonathan W. Yewdell
- 3846 Characterization of T-Dependent and T-Independent B Cell Responses to a Virus-like Particle
Wenhua Liao, Zhaolin Hua, Can Liu, Lin Lin, Rui Chen, and Baidong Hou

AUTOIMMUNITY

- 3857 CD137 Plays Both Pathogenic and Protective Roles in Type 1 Diabetes Development in NOD Mice
Matthew H. Forsberg, Ashley E. Ciecko, Kyle J. Bednar, Arata Itoh, Kritika Kachapati, William M. Ridgway, and Yi-Guang Chen
- 3869 RGC-32 Promotes Th17 Cell Differentiation and Enhances Experimental Autoimmune Encephalomyelitis
Violeta Rus, Vinh Nguyen, Alexandru Tatomir, Jason R. Lees, Armugam P. Mekala, Dallas Boodhoo, Cosmin A. Tegla, Irina G. Luzina, Paul A. Antony, Cornelia D. Cudrici, Tudor C. Badea, and Horea G. Rus
- 3878 The Nuclear Receptor Nr4a1 Acts as a Microglia Rheostat and Serves as a Therapeutic Target in Autoimmune-Driven Central Nervous System Inflammation
Tobias Rothe, Natacha Ipseiz, Maria Faas, Stefanie Lang, Francesc Perez-Branguli, Daniel Metzger, Hiroshi Ichinose, Beate Winner, Georg Schett, and Gerhard Krönke

CLINICAL AND HUMAN IMMUNOLOGY

- 3886 Chronic Fibro-Inflammatory Responses in Autoimmune Pancreatitis Depend on IFN- α and IL-33 Produced by Plasmacytoid Dendritic Cells
Tomohiro Watanabe, Kouhei Yamashita, Yasuyuki Arai, Kosuke Minaga, Ken Kamata, Tomoyuki Nagai, Yoriaki Komeda, Mamoru Takenaka, Satoru Hagiwara, Hiroshi Ida, Toshiharu Sakurai, Naoshi Nishida, Warren Strober, and Masatoshi Kudo

IMMUNE REGULATION

- 3897 CXCL17 Attenuates Imiquimod-Induced Psoriasis-like Skin Inflammation by Recruiting Myeloid-Derived Suppressor Cells and Regulatory T Cells
Tomonori Oka, Makoto Sugaya, Naomi Takahashi, Takehiro Takahashi, Sayaka Shibata, Tomomitsu Miyagaki, Yoshihide Asano, and Shinichi Sato
- 3909 IL-7R α Expression Regulates Murine Dendritic Cell Sensitivity to Thymic Stromal Lymphopoietin
Laura Kummola, Zsuzsanna Ortutay, Xi Chen, Stephane Caucheteux, Sanna Hämäläinen, Saara Aittomäki, Ryoji Yagi, Jinfang Zhu, Marko Pesu, William E. Paul, and Ilkka S. Juntila

3919 A Novel miR-24–TCF1 Axis in Modulating Effector T Cell Responses
Sunglim Cho, Cheng-Jang Wu, Duc T. Nguyen, Ling-Li Lin, Mei-Chi Chen, Aly Azeem Khan, Bi-Huei Yang, Wenxian Fu, and Li-Fan Lu

3927 The Histone Acetyltransferase Gcn5 Positively Regulates T Cell Activation
Beixue Gao, Qingfei Kong, Yana Zhang, Chawon Yun, Sharon Y. R. Dent, Jianxun Song, Donna D. Zhang, Yiming Wang, Xuemei Li, and Deyu Fang

3939 mTORC1 Promotes T-bet Phosphorylation To Regulate Th1 Differentiation
Olesya Chornoguz, Robert S. Hagan, Azeb Haile, Matthew L. Arwood, Christopher J. Gamper, Arnob Banerjee, and Jonathan D. Powell

3949 Invariant NKT Cell Activation Is Potentiated by Homotypic *trans*-Ly108 Interactions
Yuriy Baglaenko, Mayra Cruz Tleugabulova, Eric Gracey, Nafiseh Talaei, Kieran Patricia Manion, Nan-Hua Chang, Dario Michael Ferri, Thierry Mallevaey, and Joan E. Wither

IMMUNE SYSTEM DEVELOPMENT

3963 Mechanisms That Shape Human Antibody Repertoire Development in Mice Transgenic for Human Ig H and L Chain Loci
Nancy S. Longo, Tobias Rogosch, Michael Zemlin, Moncef Zouali, and Peter E. Lipsky

3978 Early B Cell Progenitors Deficient for GON4L Fail To Differentiate Due to a Block in Mitotic Cell Division
Jennifer Y. Barr, Renee X. Goodfellow, Diana F. Colgan, and John D. Colgan

IMMUNOTHERAPY AND VACCINES

3989 Interference of the T Cell and Antigen-Presenting Cell Costimulatory Pathway Using CTLA4-Ig (Abatacept) Prevents Staphylococcal Enterotoxin B Pathology
Sarah J. C. Whitfield, Chris Taylor, Jane E. Risdall, Gareth D. Griffiths, James T. A. Jones, E. Diane Williamson, Sjoerd Rijpkema, Luisa Saraiva, Sandrine Vessillier, A. Christopher Green, and Alun J. Carter

3999 Antibody Distance from the Cell Membrane Regulates Antibody Effector Mechanisms
Kirstie L. S. Cleary, H. T. Claude Chan, Sonja James, Martin J. Glennie, and Mark S. Cragg

4012 Induction of an IFN-Mediated Antiviral Response by a Self-Amplifying RNA Vaccine: Implications for Vaccine Design
Timothy Pepini, Anne-Marie Pulichino, Thomas Carsillo, Alicia L. Carlson, Farid Sari-Sarraf, Katrin Ramsauer, Jason C. Debasitis, Giulietta Maruggi, Gillis R. Otten, Andrew J. Geall, Dong Yu, Jeffrey B. Ulmer, and Carlo Iavarone

INFECTIOUS DISEASE AND HOST RESPONSE

4025 Antibody Epitopes Identified in Critical Regions of Dengue Virus Nonstructural 1 Protein in Mouse Vaccination and Natural Human Infections
Tomer Hertz, P. Robert Beatty, Zachary MacMillen, Sarah S. Killingbeck, Chunling Wang, and Eva Harris

4036 Direct Antimicrobial Activity of IFN- β
Amber Kaplan, Michelle W. Lee, Andrea J. Wolf, Jose J. Limon, Courtney A. Becker, Minna Ding, Ramachandran Murali, Ernest Y. Lee, George Y. Liu, Gerard C. L. Wong, and David M. Underhill

4046 Sex-Based Differences in Susceptibility to Severe Acute Respiratory Syndrome Coronavirus Infection
Rudragouda Channappanavar, Craig Fett, Matthias Mack, Patrick P. Ten Eyck, David K. Meyerholz, and Stanley Perlman

4054 CD11c-Expressing Cells Affect Regulatory T Cell Behavior in the Meninges during Central Nervous System Infection
Carleigh A. O'Brien, Christopher Overall, Christoph Konradt, Aisling C. O'Hara Hall, Nikolas W. Hayes, Sagie Wagage, Beena John, David A. Christian, Christopher A. Hunter, and Tajie H. Harris

4062 EBV MicroRNA BART16 Suppresses Type I IFN Signaling
Marjolein J. G. Hooykaas, Michiel van Gent, Jasper A. Soppe, Elisabeth Kruse, Ingrid G. J. Boer, Dik van Leenen, Marian J. A. Groot Koerkamp, Frank C. P. Holstege, Maaike E. Rensing, Emmanuel J. H. J. Wiertz, and Robert Jan Lebbink

INNATE IMMUNITY AND INFLAMMATION

- 4074 Endothelial MAPKs Direct ICAM-1 Signaling to Divergent Inflammatory Functions
Silvia Dragoni, Natalie Hudson, Bridget-Ann Kenny, Thomas Burgoyne, Jenny A. McKenzie, Yadvinder Gill, Robert Blaber, Clare E. Futter, Peter Adamson, John Greenwood, and Patric Turowski
- 4086 Raf Kinase Inhibitor Protein Preferentially Promotes TLR3-Triggered Signaling and Inflammation
Rongrong Lai, Meidi Gu, Wei Jiang, Wenlong Lin, Penglei Xu, Zhiyong Liu, He Huang, Huazhang An, and Xiaojian Wang
- 4096 Microbiota-Induced Antibodies Are Essential for Host Inflammatory Responsiveness to Sterile and Infectious Stimuli
Daniel Cisalpino, Caio T. Fagundes, Camila B. Brito, Fernando R. Ascensão, Celso M. Queiroz-Junior, Angélica T. Vieira, Lirlândia P. Sousa, Flávio A. Amaral, Leda Q. Vieira, Jacques R. Nicoli, Mauro M. Teixeira, and Danielle G. Souza

MUCOSAL IMMUNOLOGY

- 4107 Mucosal IgM Antibody with D-Mannose Affinity in Fugu *Takifugu rubripes* Is Utilized by a Monogenean Parasite *Heterobothrium okamotoi* for Host Recognition
Kento Igarashi, Ryohei Matsunaga, Sachi Hirakawa, Sho Hosoya, Hiroaki Suetake, Kiyoshi Kikuchi, Yuzuru Suzuki, Osamu Nakamura, Toshiaki Miyadai, Satoshi Tasumi, and Shigeyuki Tsutsui
- 4115 Extravillous Trophoblast and Endothelial Cell Crosstalk Mediates Leukocyte Infiltration to the Early Remodeling Decidual Spiral Arteriole Wall
Ruhul H. Choudhury, Caroline E. Dunk, Stephen J. Lye, John D. Aplin, Lynda K. Harris, and Rebecca L. Jones

TUMOR IMMUNOLOGY

- 4129 The Granulocyte Progenitor Stage Is a Key Target of IRF8-Mediated Regulation of Myeloid-Derived Suppressor Cell Production
Colleen S. Netherby, Michelle N. Messmer, Lauren Burkard-Mandel, Sean Colligan, Austin Miller, Eduardo Cortes Gomez, Jianmin Wang, Michael J. Nemeth, and Scott I. Abrams
- 4140 Aminoacyl tRNA Synthetase-Interacting Multifunctional Protein 1 Activates NK Cells via Macrophages In Vitro and In Vivo
Myun Soo Kim, Ju Han Song, Edward P. Cohen, Daeho Cho, and Tae Sung Kim

NOVEL IMMUNOLOGICAL METHODS

- 4148 CSReport: A New Computational Tool Designed for Automatic Analysis of Class Switch Recombination Junctions Sequenced by High-Throughput Sequencing
François Boyer, Hend Boutouil, Iman Dalloul, Zeinab Dalloul, Jeanne Cook-Moreau, Jean-Claude Aldigier, Claire Carrion, Bastien Herve, Erwan Scaon, Michel Cogné, and Sophie Péron
- 4156 Antigen Receptor Galaxy: A User-Friendly, Web-Based Tool for Analysis and Visualization of T and B Cell Receptor Repertoire Data
Hanna IJspeert, Pauline A. van Schouwenburg, David van Zessen, Ingrid Pico-Knijnenburg, Andrew P. Stubbs, and Mirjam van der Burg
- 4166 4PD Functionalized Dendrimers: A Flexible Tool for In Vivo Gene Silencing of Tumor-Educated Myeloid Cells
Serena Zilio, Jennifer L. Vella, Adriana C. De la Fuente, Pirouz M. Daftarian, Donald T. Weed, Angel Kaifer, Ilaria Marigo, Kevin Leone, Vincenzo Bronte, and Paolo Serafini

- 4178 AUTHOR INDEX