

## IN THIS ISSUE

- 1620 Finding NEMO mutations  
Splenic schooling dampens inflammation  
Dendritic cell paralysis  
Melanomas disable DCs  
T cells get energized  
Heather L. Van Epps

## FROM THE ARCHIVE

- 1622 Kicking off adaptive immunity: the discovery of dendritic cells  
Alla Katsnelson

## BRIEF DEFINITIVE REPORTS

- 1623 Splenectomy inactivates the cholinergic antiinflammatory pathway during lethal endotoxemia and polymicrobial sepsis  
Jared M. Huston, Mahendar Ochani, Mauricio Rosas-Ballina, Hong Liao, Kanta Ochani, Valentin A. Pavlov, Margot Gallowitsch-Puerta, Mala Ashok, Christopher J. Czura, Brian Foxwell, Kevin J. Tracey, and Luis Ulloa  
See news item on page 1620

- 1629 Plasmacytoid dendritic cells of melanoma patients present exogenous proteins to CD4<sup>+</sup> T cells after Fc $\gamma$ RII-mediated uptake  
Daniel Benitez-Ribas, Gosse J. Adema, Gregor Winkels, Ina S. Klasen, Cornelis J.A. Punt, Carl G. Figdor, and I. Jolanda M. de Vries

- 1637 Role of HMGB1 in apoptosis-mediated sepsis lethality  
Shixin Qin, Haichao Wang, Renqi Yuan, Hui Li, Mahendar Ochani, Kanta Ochani, Mauricio Rosas-Ballina, Chris J. Czura, Jared M. Huston, Ed Miller, Xinchun Lin, Barbara Sherry, Anjali Kumar, Greg LaRosa, Walter Newman, Kevin J. Tracey, and Huan Yang

- 1643 The clone size of peripheral CD8 T cells is regulated by TCR promiscuity  
Yi Hao, Nicolas Legrand, and Antonio A. Freitas

- 1651 The BRAF–MAPK signaling pathway is essential for cancer-immune evasion in human melanoma cells  
Hidetoshi Sumimoto, Fumie Imabayashi, Tomoko Iwata, and Yutaka Kawakami  
See news item on page 1621

- 1657 FOXO3a-dependent regulation of Puma in response to cytokine/growth factor withdrawal  
Han You, Marc Pellegrini, Katsuya Tsuchihara, Kazuo Yamamoto, Georg Hacker, Miriam Erlacher, Andreas Villunger, and Tak W. Mak



## ON THE COVER

Cover image by graphic artist Stacey Posnett ([stacey@posnett.net](mailto:stacey@posnett.net)). Image shows the vagus nerve delivering antiinflammatory signals to the spleen. Related article by Huston et al.  
See page 1623

- 1665 Regulation of the energy sensor AMP-activated protein kinase by antigen receptor and  $\text{Ca}^{2+}$  in T lymphocytes

Peter Tamás, Simon A. Hawley, Rosemary G. Clarke, Kirsty J. Mustard, Kevin Green, D. Grahame Hardie, and Doreen A. Cantrell

[See news item on page 1621](#)

- 1671 ESAM supports neutrophil extravasation, activation of Rho, and VEGF-induced vascular permeability

Frank Wegmann, Björn Petri, Alexander Georg Khandoga, Christian Moser, Andrej Khandoga, Stefan Volkery, Hang Li, Ines Nasdala, Oliver Brandau, Reinhard Fässler, Stefan Butz, Fritz Krombach, and Dietmar Vestweber

- 1679 An autosomal dominant major gene confers predisposition to pulmonary tuberculosis in adults

Jamila El Baghdadi, Marianna Orlova, Andrea Alter, Brigitte Ranque, Mohamed Chentoufi, Faouzia Lazrak, Moulay Idriss Archane, Jean-Laurent Casanova, Abdellah Benslimane, Erwin Schurr, and Laurent Abel

- 1685 A crucial role for interleukin (IL)-1 in the induction of IL-17-producing T cells that mediate autoimmune encephalomyelitis

Caroline Sutton, Corinna Brereton, Brian Keogh, Kingston H.G. Mills, and Ed C. Lavelle

- 1693 Expression of interleukin (IL)-2 and IL-7 receptors discriminates between human regulatory and activated T cells

Nabila Seddiki, Brigitte Santner-Nanan, Jeff Martinson, John Zaunders, Sarah Sasson, Alan Landay, Michael Solomon, Warwick Selby, Stephen I. Alexander, Ralph Nanan, Anthony Kelleher, and Barbara Fazekas de St. Groth

## ARTICLES

- 1701 CD127 expression inversely correlates with FoxP3 and suppressive function of human CD4 $^{+}$  T reg cells

Weihong Liu, Amy L. Putnam, Zhou Xu-yu, Gregory L. Szot, Michael R. Lee, Shirley Zhu, Peter A. Gottlieb, Philipp Kapranov, Thomas R. Gingeras, Barbara Fazekas de St. Groth, Carol Clayberger, David M. Soper, Steven F. Ziegler, and Jeffrey A. Bluestone

- 1713 Massive and destructive T cell response to homeostatic cue in CD24-deficient lymphopenic hosts

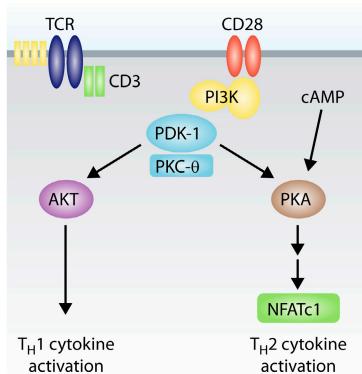
Ou Li, Xing Chang, Huiming Zhang, Ergun Kocak, Cheng Ding, Pan Zheng, and Yang Liu

- 1721 Critical roles of the immunoglobulin intronic enhancers in maintaining the sequential rearrangement of *IgH* and *Igk* loci

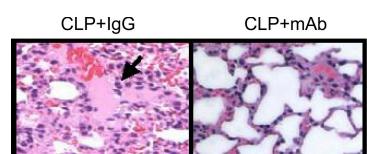
Matthew A. Inlay, Tongxiang Lin, Heather H. Gao, and Yang Xu

- 1733 Phosphoinositide-dependent kinase 1 targets protein kinase A in a pathway that regulates interleukin 4

Ajay Nirula, Mary Ho, Hyewon Phee, Jeroen Roose, and Arthur Weiss



The kinases PDK-1 and PKA get together to turn on Th2 cytokines.  
[See page 1733](#)

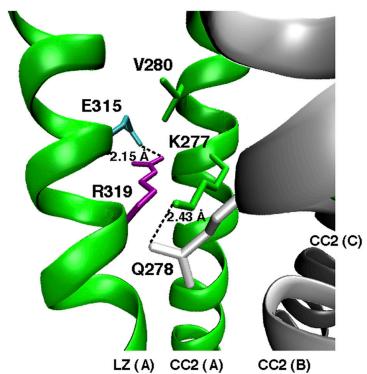


Antibodies against high mobility group box-1 protein (mAb) protect against organ damage during sepsis without decreasing apoptosis.  
[See page 1637](#)

- 1745** X-linked susceptibility to mycobacteria is caused by mutations in NEMO impairing CD40-dependent IL-12 production  
 Orchidée Filipe-Santos, Jacinta Bustamante, Margje H. Haverkamp, Emilie Vinolo, Cheng-Lung Ku, Anne Puel, David M. Frucht, Karin Christel, Horst von Bernuth, Emmanuelle Jouanguy, Jacqueline Feinberg, Anne Durandy, Brigitte Senechal, Ariane Chappier, Guillaume Vogt, Ludovic de Beaucoudrey, Claire Fieschi, Capucine Picard, Meriem Garfa, Jalel Chemli, Mohamed Bejaoui, Maria N. Tsolia, Necil Kutukculer, Alessandro Plebani, Luigi Notarangelo, Christine Bodemer, Frédéric Geissmann, Alain Israël, Michel Véron, Maike Knackstedt, Ridha Barbouche, Laurent Abel, Klaus Magdorf, Dominique Gendrel, Fabrice Agou, Steven M. Holland, and Jean-Laurent Casanova

[See news item on page 1620](#)

- 1761** Light chain editing generates polyreactive antibodies in chronic graft-versus-host reaction  
 Esther J. Witsch, Hong Cao, Hidehiro Fukuyama, and Martin Weigert

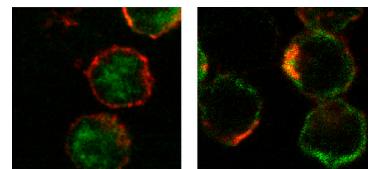


Point mutations in the leucine zipper domain of NEMO impair interleukin-12 production in response to CD40 ligation.  
[See page 1745](#)

- 1773** Essential role of membrane cholesterol in accelerated BCR internalization and uncoupling from NF-κB in B cell clonal anergy  
 Mathieu Bléry, Lina Tze, Lisa A. Miosge, Jesse E. Jun, and Christopher C. Goodnow

- 1785** Igβ tyrosine residues contribute to the control of B cell receptor signaling by regulating receptor internalization  
 Anna Gazumyan, Amy Reichlin, and Michel C. Nussenzweig

- 1795** Essential role of IPS-1 in innate immune responses against RNA viruses  
 Himanshu Kumar, Taro Kawai, Hiroki Kato, Shintaro Sato, Ken Takahashi, Cevayir Coban, Masahiro Yamamoto, Satoshi Uematsu, Ken J. Ishii, Osamu Takeuchi, and Shizuo Akira



Anergic cells (right) sequester B cell receptors (red) in their cytoplasm in a cholesterol-dependent manner.  
[See page 1773](#)

- 1805** Interleukin 12p40 is required for dendritic cell migration and T cell priming after *Mycobacterium tuberculosis* infection  
 Shabaana A. Khader, Santiago Partida-Sánchez, Guy Bell, Dawn M. Jolley-Gibbs, Susan Swain, John E. Pearl, Nico Ghilardi, Frederic J. deSauvage, Frances E. Lund, and Andrea M. Cooper

[See news item on page 1621](#)

- 1817** A major histocompatibility complex class I-dependent subset of memory phenotype CD8<sup>+</sup> cells  
 Onur Boyman, Jae-Ho Cho, Joyce T. Tan, Charles D. Surh, and Jonathan Sprent

- 1827** Correction  
**1829** Correction  
**1831** Correction