

ON THE COVER

As shown by Morita et al. and discussed by Hock, different hematopoietic stem cells (HSCs) exhibit different propensities to give rise to individual hematopoietic lineages. Each column represents the complete spectrum of hematopoietic reconstitution induced by an individual HSC, with each color representing a distinct lineage. Artwork by Joshua Graver (joshuagraver@mac.com). See pages 1127 and 1173

Minireviews

- 1127 Some hematopoietic stem cells are more equal than others
Hanno Hock
- 1131 Found in translation: the human equivalent of mouse CD8⁺ dendritic cells
Jose A. Villadangos and Ken Shortman

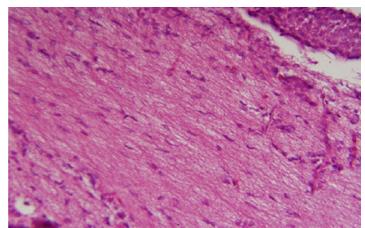
Brief Definitive Reports

- 1135 Complement drives Th17 cell differentiation and triggers autoimmune arthritis
Motomu Hashimoto, Keiji Hirota, Hiroyuki Yoshitomi, Shinji Maeda, Shin Teradaira, Shuji Akizuki, Paz Prieto-Martin, Takashi Nomura, Noriko Sakaguchi, Jörg Köhl, Birgitta Heyman, Minoru Takahashi, Teizo Fujita, Tsuneyo Mimori, and Shimon Sakaguchi
- 1145 Activating WASP mutations associated with X-linked neutropenia result in enhanced actin polymerization, altered cytoskeletal responses, and genomic instability in lymphocytes
Lisa S. Westerberg, Parool Meelu, Marisa Baptista, Michelle A. Eston, David A. Adamovich, Vinicius Cotta-de-Almeida, Brian Seed, Michael K. Rosen, Peter Vandenberghe, Adrian J. Thrasher, Christoph Klein, Frederick W. Alt, and Scott B. Snapper
- 1153 The route of priming influences the ability of respiratory virus-specific memory CD8⁺ T cells to be activated by residual antigen
Shiki Takamura, Alan D. Roberts, Dawn M. Jolley-Gibbs, Susan T. Wittmer, Jacob E. Kohlmeier, and David L. Woodland

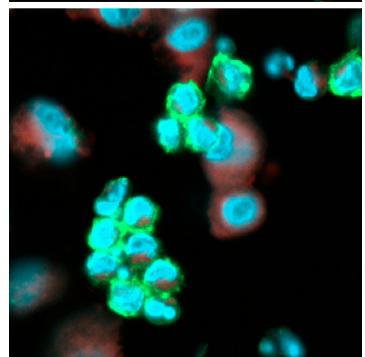
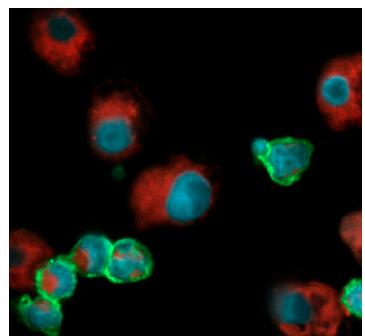
Articles

- 1161 Antigen persistence and the control of local T cell memory by migrant respiratory dendritic cells after acute virus infection
Taeg S. Kim, Matthew M. Hufford, Jie Sun, Yang-Xin Fu, and Thomas J. Braciale
- 1173 Heterogeneity and hierarchy within the most primitive hematopoietic stem cell compartment
Yohei Morita, Hideo Ema, and Hiromitsu Nakuchi
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- 1183 SENP1-mediated GATA1 deSUMOylation is critical for definitive erythropoiesis
Luyang Yu, Weidong Ji, Haifeng Zhang, Matthew J. Renda, Yun He, Sharon Lin, Ee-chun Cheng, Hong Chen, Diane S. Krause, and Wang Min
- 1197 Tob1 is a constitutively expressed repressor of liver regeneration
Karen J. Ho, Nhue L. Do, Hasan H. Otu, Martin J. Dib, Xianghui Ren, Keiichi Enyoyaji, Simon C. Robson, Ernest F. Terwilliger, and Seth J. Karp
- 1209 BCL6 is critical for the development of a diverse primary B cell repertoire
Cihangir Duy, J. Jessica Yu, Rahul Nahar, Srividya Swaminathan, Soo-Mi Kweon, Jose M. Polo, Ester Valls, Lars Klemm, Seyedmehdi Shojaee, Leandro Cerchietti, Wolfgang Schuh, Hans-Martin Jäck, Christian Hurtz, Parham Ramezani-Rad, Sebastian Herzog, Hassan Jumaa, H. Phillip Koeffler, Ignacio Moreno de Alborán, Ari M. Melnick, B. Hilda Ye, and Markus Müschen

- 1223 Peptide-MHC heterodimers show that thymic positive selection requires a more restricted set of self-peptides than negative selection**
Jeremy Juang, Peter J.R. Ebert, Dan Feng, K. Christopher Garcia, Michelle Krogsgaard, and Mark M. Davis
- 1235 One naive T cell, multiple fates in CD8⁺ T cell differentiation**
Carmen Gerlach, Jeroen W.J. van Heijst, Erwin Swart, Daoud Sie, Nicola Armstrong, Ron M. Kerkhoven, Dietmar Zehn, Michael J. Bevan, Koen Schepers, and Ton N.M. Schumacher
- 1247 Human CD141⁺ (BDCA-3)⁺ dendritic cells (DCs) represent a unique myeloid DC subset that cross-presents necrotic cell antigens**
Sarah L. Jongbloed, Andrew J. Kassianos, Kylie J. McDonald, Georgina J. Clark, Xinsheng Ju, Catherine E. Angel, Chun-Jen J. Chen, P. Rod Dunbar, Robert B. Wadley, Varinder Jeet, Annelie J.E. Vulink, Derek N.J. Hart, and Kristen J. Radford
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- 1261 Characterization of human DNGR-1⁺ BDCA3⁺ leukocytes as putative equivalents of mouse CD8α⁺ dendritic cells**
Lionel Franz Poulin, Mariolina Salio, Emmanuel Giessinger, Fernando Anjos-Afonso, Ligia Craciun, Ji-Li Chen, Anna M. Keller, Olivier Joffre, Santiago Zelenay, Emma Nye, Alain Le Moine, Florence Faure, Vincent Donckier, David Sancho, Vincenzo Cerundolo, Dominique Bonnet, and Caetano Reis e Sousa
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- 1273 Superior antigen cross-presentation and XCR1 expression define human CD11c⁺CD141⁺ cells as homologues of mouse CD8⁺ dendritic cells**
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- 1283 The XC chemokine receptor 1 is a conserved selective marker of mammalian cells homologous to mouse CD8α⁺ dendritic cells**
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- 1293 Pathological versus protective functions of IL-22 in airway inflammation are regulated by IL-17A**
Gregory F. Sonnenberg, Meera G. Nair, Thomas J. Kirn, Colby Zaph, Lynette A. Fouser, and David Artis
- 1307 IL-10 administration reduces PGE-2 levels and promotes CR3-mediated clearance of *Escherichia coli* K1 by phagocytes in meningitis**
Rahul Mittal, Ignacio Gonzalez-Gomez, Ashok Panigrahy, Kerstin Goth, Richard Bonnet, and Nemani V. Prasad Rao



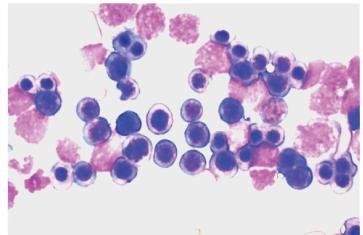
Antibiotic action of IL-10
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Human cross-presenting DCs.
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1321 Microbiota innate stimulation is a prerequisite for T cell spontaneous proliferation and induction of experimental colitis
Ting Feng, Lanfang Wang, Trenton R. Schoeb, Charles O. Elson, and Yingzi Cong

1333 Innate immunity defines the capacity of antiviral T cells to limit persistent infection
Daniel M. Andrews, Marie J. Estcourt, Christopher E. Andoniou, Matthew E. Wikstrom, Andrea Khong, Valentina Voigt, Peter Fleming, Hyacinth Tabarias, Geoffrey R. Hill, Robbert G. van der Most, Anthony A. Scalzo, Mark J. Smyth, and Mariapia A. Degli-Esposti



SENP1 deSUMOylates GATA1.
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