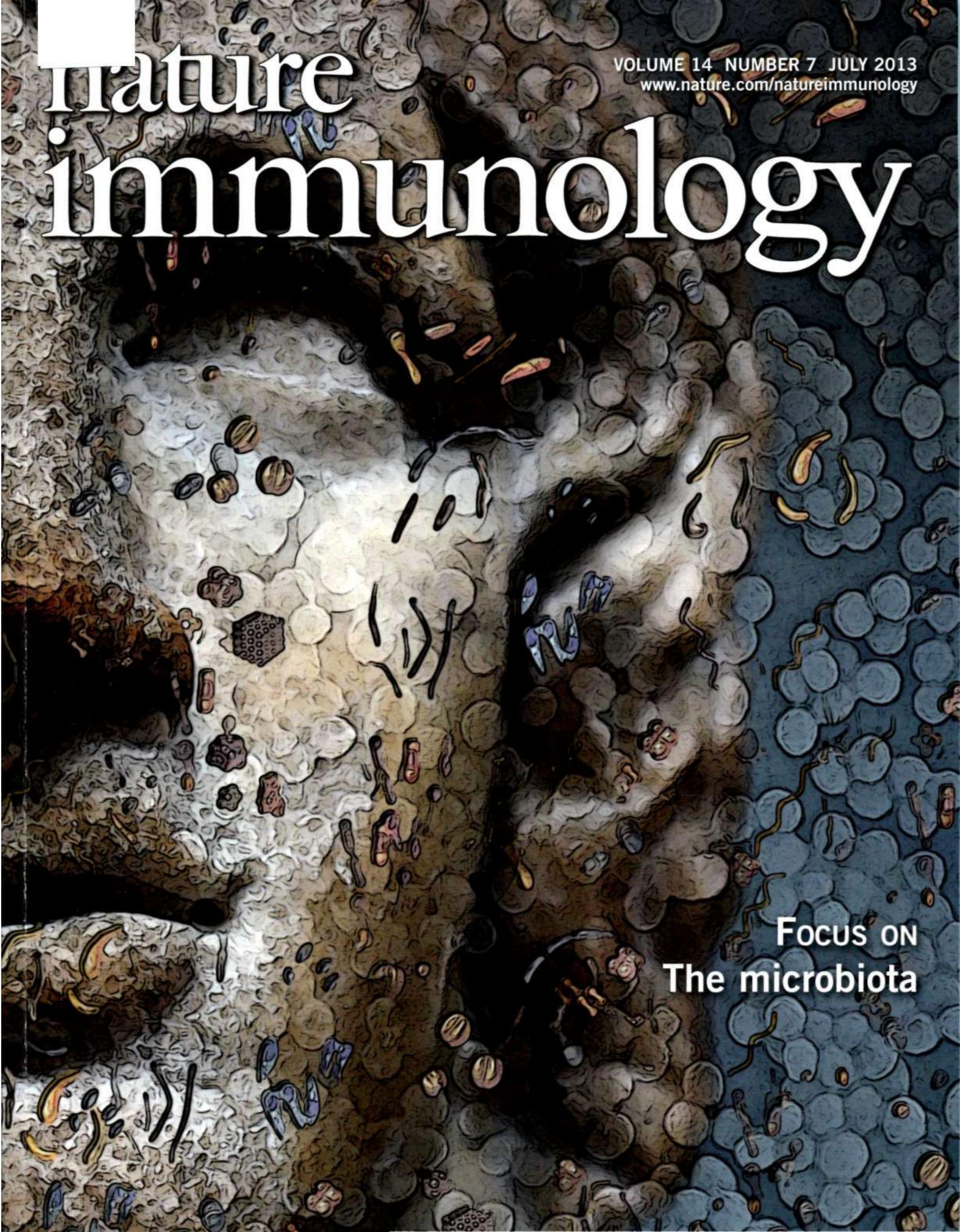


nature immunology



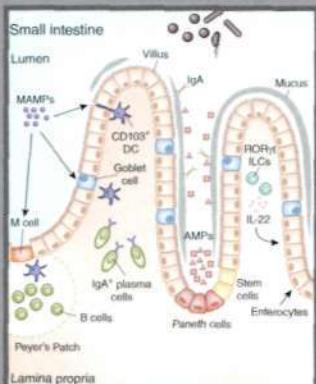
VOLUME 14 NUMBER 7 JULY 2013
www.nature.com/natureimmunology

Focus on
The microbiota



A complex resident community of microbes, referred to as the 'commensal microbiota', has coevolved with humans. This month's Focus features a series of specially commissioned articles that discuss the interactions between the microbiota and the immune system and their influence on local and systemic immunological homeostasis. <http://www.nature.com/ni/focus/microbiota>

Art work by Lewis Long.



Achieving gut homeostasis (p 660)

nature immunology

FOCUS ON: THE MICROBIOTA

EDITORIAL

- 645 The world within

PERSPECTIVES

- 646 Compartmentalized and systemic control of tissue immunity by commensals
Yasmine Belkaid & Shruti Naik
- 654 Resident viruses and their interactions with the immune system
Breck A Duerkop & Lora V Hooper

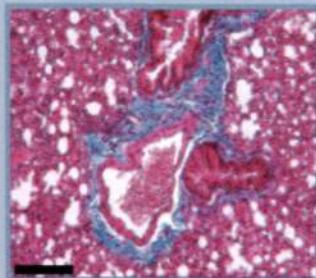
REVIEWS

- 660 The role of the immune system in governing host-microbe interactions in the intestine
Eric M Brown, Manish Sadarangani & B Brett Finlay
- 668 Innate immune recognition of the microbiota promotes host-microbial symbiosis
Hiutung Chu & Sarkis K Mazmanian
- 676 Commensal bacteria at the interface of host metabolism and the immune system
Jonathan R Brestoff & David Artis
- 685 Control of pathogens and pathobionts by the gut microbiota
Nobuhiko Kamada, Grace Y Chen, Naohiro Inohara & Gabriel Núñez
- 690 RESEARCH HIGHLIGHTS

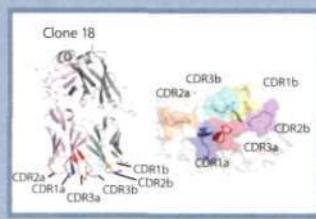


nature publishing group

Nature Immunology (ISSN 1529-2908) is published monthly by Nature Publishing Group, a trading name of Nature America Inc, located at 75 Varick Street, Fl 9, New York, NY 10013-1917. Periodicals postage paid at New York, NY and additional mailing post offices. **Editorial Office:** 75 Varick Street, Fl 9, New York, NY 10013-1917. Tel: (212) 726 9207, Fax: (212) 696 9752. **Annual subscription rates:** USA/Canada: US\$225 (personal), US\$4,677 (institution). Canada add 5% GST #140911599R001; Euro-zone: €287 (personal), €3,713 (institution); Rest of world (excluding China, Japan, Korea): £185 (personal), £2,400 (institution); Japan: Contact NPG Nature Asia-Pacific, Chiyoda Building, 2-37 Ichigaya-tamachi, Shinjuku-ku, Tokyo 162-0843; Tel: 81 (03) 3267 8751, Fax: 81 (03) 3267 8746. **POSTMASTER:** Send address changes to *Nature Immunology*, Subscriptions Department, 75 Varick Street, 9th Floor, New York, NY 10013-1917. **Authorization to photocopy** material for internal or personal use, or internal or personal use of specific clients, is granted by Nature Publishing Group to libraries and others registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided the relevant copyright fee is paid direct to CCC, 222 Rosewood Drive, Danvers, MA 01923, USA. Identification code for *Nature Immunology*: 1529-2908/04. **Back issues:** US\$45, Canada add 7% for GST, CPC PUB AGREEMENT #40032744. Printed on acid-free paper by The Sheridan Press, Hanover, PA, USA. Copyright © 2013 Nature Publishing Group. Printed in USA.



Controlling airway allergy
(pp 692 and 732)



'GEM' T cells (pp 694 and 706)



Regulating TCR signals (p 723)

NEWS AND VIEWS

- 692 **CIS: the late-blooming eldest son**
Akihiko Yoshimura *see also p 732*
- 694 **A 'GEM' of a cell**
Mitchell Kronenberg & Dirk M Zajonc *see also p 706*
- 696 **Regulation unmasked by activation**
Mike Clark & Anne Cooke *see also p 741*
- 698 **RESEARCH HIGHLIGHTS**

ARTICLES

- 699 **Targeting of a natural killer cell receptor family by a viral immunoevasin**
Richard Berry, Natasha Ng, Philippa M Saunders, Julian P Vivian, Jie Lin, Felix A Deuss, Alexandra J Corbett, Catherine A Forbes, Jacqueline M Widjaja, Lucy C Sullivan, Adrian D McAlister, Matthew A Perugini, Melissa J Call, Anthony A Scalzo, Mariapia A Degli-Esposti, Jerome D Coudert, Travis Beddoe, Andrew G Brooks & Jamie Rossjohn
- 706 **A conserved human T cell population targets mycobacterial antigens presented by CD1b**
Ildiko Van Rhijn, Anne Kasmar, Annemieke de Jong, Stephanie Gras, Mugdha Bhati, Marieke E Doorenspleet, Niek de Vries, Dale I Godfrey, John D Altman, Wilco de Jager, Jamie Rossjohn & D Branch Moody *see also p 694*
- 714 **GATA-3 controls the maintenance and proliferation of T cells downstream of TCR and cytokine signaling**
Yunqi Wang, Ichiro Misumi, Ai-Di Gu, T Anthony Curtis, Lishan Su, Jason K Whitmire & Yisong Y Wan
- 723 **VAMP7 controls T cell activation by regulating the recruitment and phosphorylation of vesicular Lat at TCR-activation sites**
Paola Larghi, David J Williamson, Jean-Marie Carpier, Stéphanie Dogniaux, Karine Chemin, Armelle Bohineust, Lydia Danglot, Katharina Gaus, Thierry Galli & Claire Hivroz
- 732 **The signaling suppressor CIS controls proallergic T cell development and allergic airway inflammation**
Xuexian O Yang, Huiyuan Zhang, Byung-Seok Kim, Xiaoyin Niu, Juan Peng, Yuhong Chen, Romica Kerketta, Young-Hee Lee, Seon Hee Chang, David B Corry, Demin Wang, Stephanie S Watowich & Chen Dong *see also p 692*
- 741 **T cell regulation mediated by interaction of soluble CD52 with the inhibitory receptor Siglec-10**
Esther Bandala-Sanchez, Yuxia Zhang, Simone Reinwald, James A Dromey, Bo-Han Lee, Junyan Qian, Ralph M Böhmer & Leonard C Harrison *see also p 696*
- 749 **A comprehensive analysis of the effects of the deaminase AID on the transcriptome and methylome of activated B cells**
Eric L Fritz, Brad R Rosenberg, Kenneth Lay, Aleksandra Mihailović, Thomas Tuschl & F Nina Papavasiliou

RESOURCE

- 756 **The transcriptional architecture of early human hematopoiesis identifies multilevel control of lymphoid commitment**
Elisa Laurenti, Sergei Doulatov, Sasan Zandi, Ian Plumb, Jing Chen, Craig April, Jian-Bing Fan & John E Dick

NATURE IMMUNOLOGY CLASSIFIED

See back pages.