nature immunology

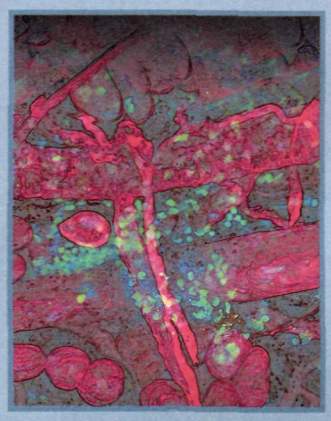
VOLUME 15 NUMBER 8 AUGUST 2014
www.nature.com/natureimmunology

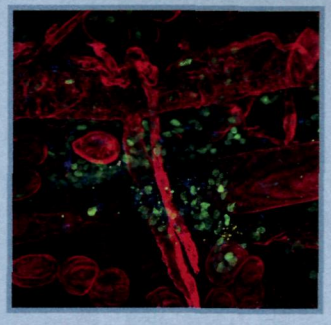
Spreading inflammation via ASC specks

Inducing type III interferon

Potent anticancer T_H9 cells

VOLUME 15 NUMBER 8 AUGUST 2014





Cells of the immune system release cytokine 'factories' in the form of bioactive extracellular inflammasome assemblies. New findings by Franklin *et al.* and Baroja-Mazo *et al.* (pp 727 and 738; and News and Views by Broderick & Hoffman, p 698) identify extracellular functions of inflammasomes that are important for autoimmunity and the defense against pathogens. The original image shows the recruitment of neutrophils to injected extracellular specks of the adaptor ASC, which demonstrates their function as danger signals. Original image by Jacqueline M. Ratter. Artwork by Lewis Long.

Writing well (p 695)

nature immunology

COMMENTARY

695 **Writing well: lowering the barriers to success**
James C Gould, Rafael E Luna & Donna L Vogel

NEWS AND VIEWS

698 **cASCading specks**
Lori Broderick & Hal M Hoffman *see also pp 727 & 738*

700 **Peroxisomal MAVS activates IRF1-mediated IFN-λ production**
Siyuan Ding & Michael D Robek *see also p 717*

701 **Enhancing the understanding of asthma**
Golnaz Vahedi, Arianne C Richard & John J O'Shea *see also p 777*

703 **An antitumor boost to T_H9 cells**
Sergio A Quezada & Karl S Peggs *see also p 758*

706 RESEARCH HIGHLIGHTS

REVIEW

707 **Type I and type II Fc receptors regulate innate and adaptive immunity**
Andrew Pincetic, Stylianos Bournazos, David J DiLillo, Jad Maamary, Taia T Wang, Rony Dahan, Benjamin-Maximillian Fiebiger & Jeffrey V Ravetch

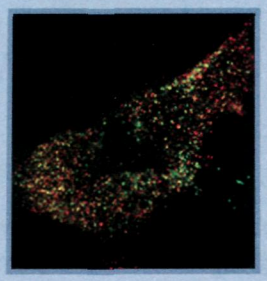
ARTICLES

717 **Diverse intracellular pathogens activate type III interferon expression from peroxisomes**
Charlotte Odendall, Evelyn Dixit, Fabrizia Stavru, Helene Bierne, Kate M Franz, Ann Fiegen Durbin, Steeve Boulant, Lee Gehrke, Pascale Cossart & Jonathan C Kagan *see also p 700*

727 **The adaptor ASC has extracellular and 'prionoid' activities that propagate inflammation**
Bernardo S Franklin, Lukas Bossaller, Dominic De Nardo, Jacqueline M Ratter, Andrea Stutz, Gudrun Engels, Christoph Brenker, Mark Nordhoff, Sandra R Mirandola, Ashraf Al-Amoudi, Matthew S Mangan, Sebastian Zimmer, Brian G Monks, Martin Fricke, Reinhold E Schmidt, Terje Espevik, Bernadette Jones, Andrew G Jarnicki, Philip M Hansbro, Patricia Busto, Ann Marshak-Rothstein, Simone Hornemann, Adriano Aguzzi, Wolfgang Kastenmüller & Eicke Latz *see also pp 698 & 738*

npg
nature publishing group

Nature Immunology (ISSN 1529-2908) published monthly by Nature America Inc. trading as Nature Publishing Group, 75 Varick Street, Fl 9, New York, NY 10013-1917, USA. US Periodicals postage paid at New York, NY and additional mailing post offices. **US POSTMASTER:** Send address changes to Nature America, Inc. Subscriptions Department, 75 Varick Street, 9th Floor, New York, NY 10013-1917, USA.



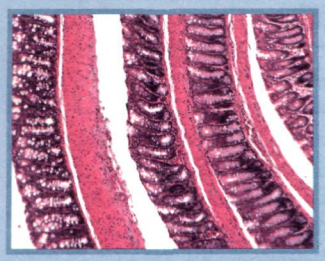
Activation of type III interferons (p 717)

738 **The NLRP3 inflammasome is released as a particulate danger signal that amplifies the inflammatory response**
Alberto Baroja-Mazo, Fatima Martín-Sánchez, Ana I Gomez, Carlos M Martínez, Joaquín Amores-Iniesta, Vincent Compan, Maria Barberà-Cremades, Jordi Yagüe, Estibaliz Ruiz-Ortiz, Jordi Antón, Segundo Buján, Isabelle Couillin, David Brough, Juan I Arostegui & Pablo Pelegrín *see also pp 698 & 727*

749 **The metabolic checkpoint kinase mTOR is essential for IL-15 signaling during the development and activation of NK cells**
Antoine Marçais, Julien Cherfils-Vicini, Charlotte Viant, Sophie Degouve, Sébastien Viel, Aurore Fenis, Jessica Rabilloud, Katia Mayol, Armelle Tavares, Jacques Bienvenu, Yann-Gaël Gangloff, Eric Gilson, Eric Vivier & Thierry Walzer

758 **The transcription factor IRF1 dictates the IL-21-dependent anticancer functions of T_H9 cells**
Frédérique Végran, Hélène Berger, Romain Boidot, Grégoire Mignot, Mélanie Bruchard, Magalie Dosset, Fanny Chalmin, Cédric Rébé, Valentin Dérangère, Bernhard Ryffel, Masashi Kato, Armelle Prévost-Blondel, François Ghiringhelli & Lionel Apetoh *see also p 703*

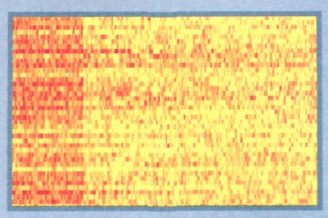
767 **Id2 and Id3 maintain the regulatory T cell pool to suppress inflammatory disease**
Masaki Miyazaki, Kazuko Miyazaki, Shuwen Chen, Manami Itoi, Marina Miller, Li-Fan Lu, Nissi Varki, Aaron N Chang, David H Broide & Cornelis Murre



Regulatory T cell pool (p 767)

RESOURCE

777 **Epigenomic analysis of primary human T cells reveals enhancers associated with T_H2 memory cell differentiation and asthma susceptibility**
Grégory Seumois, Lukas Chavez, Anna Gerasimova, Matthias Lienhard, Nada Omran, Lukas Kalinke, Maria Vedanayagam, Asha Purnima V Ganesan, Ashu Chawla, Ratko Djukanović, K Mark Ansel, Bjoern Peters, Anjana Rao & Pandurangan Vijayanand *see also p 701*



Susceptibility to asthma (pp 701 and 777)

NATURE IMMUNOLOGY CLASSIFIED

See back pages.