

A microscopic image showing a large cluster of mast cells. The cells are stained with a blue dye, likely toluidine blue, which highlights their granules. The granules are numerous, round, and filled with a reddish-brown substance, characteristic of histamine. The cells are arranged in a somewhat circular pattern, with some granules appearing more densely packed than others. The background is dark, making the blue-stained cells stand out.

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Driving mast cell maturation
Natural T_H17 cell development
Phagosome acidification

nature immunology

COMMENTARY

- 523 Publishing and patenting the fruits of academic research: the key to a successful parallel track**
Janet E Reed


NEWS AND VIEWS

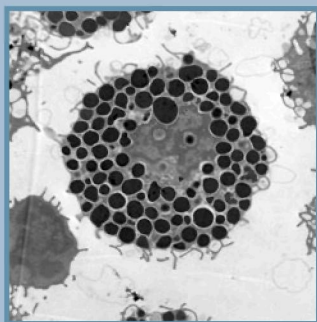
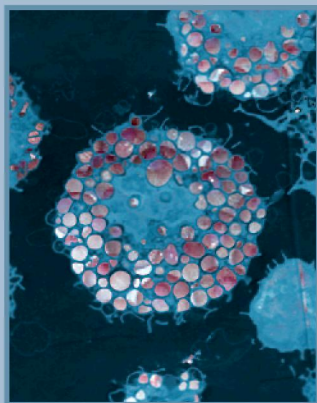
- 527 PLA2G3 promotes mast cell maturation and function**
Philipp Starkl, Thomas Marichal & Stephen J Galli  see also p 554
- 529 Deconstructing development**
Christelle Harly, E John Wherry & Avinash Bhandoola  see also p 633
- 531 T cell exhaustion: a means or an end?**
Shahram Salek-Ardakani & Stephen P Schoenberger  see also p 603
- 533 Killer T cells find meaningful encounters through iMATEs**
Ian N Crispe & Robert H Pierce  see also p 574
- 535 RESEARCH HIGHLIGHTS**

REVIEW

- 536 T_H2, allergy and type 2 innate lymphoid cells**
Paula Licona-Limón, Lark Kyun Kim, Noah W Palm & Richard A Flavell

ARTICLES

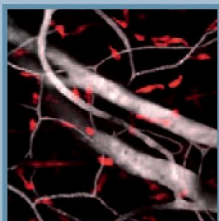
- 543 Activation of caspase-1 by the NLRP3 inflammasome regulates the NADPH oxidase NOX2 to control phagosome function**
Anna Sokolovska, Christine E Becker, W K Eddie Ip, Vijay A K Rathinam, Matthew Brudner, Nicholas Paquette, Antoine Tanne, Sivapriya K Vanaja, Kathryn J Moore, Katherine A Fitzgerald, Adam Lacy-Hulbert & Lynda M Stuart
- 554 Mast cell maturation is driven via a group III phospholipase A₂-prostaglandin D₂-DP1 receptor paracrine axis**
Yoshitaka Taketomi, Noriko Ueno, Takumi Kojima, Hiroyasu Sato, Remi Murase, Kei Yamamoto, Satoshi Tanaka, Mariko Sakanaka, Masanori Nakamura, Yasumasa Nishito, Momoko Kawana, Naotomo Kambe, Kazutaka Ikeda, Ryo Taguchi, Satoshi Nakamizo, Kenji Kabashima, Michael H Gelb, Makoto Arita, Takehiko Yokomizo, Motonao Nakamura, Kikuko Watanabe, Hiroyuki Hirai, Masataka Nakamura, Yoshimichi Okayama, Chisei Ra, Kosuke Aritake, Yoshihiro Urade, Kazushi Morimoto, Yukihiko Sugimoto, Takao Shimizu, Shuh Narumiya, Shuntaro Hara & Makoto Murakami  see also p 527



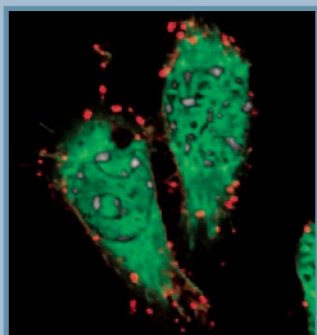
Mast cells mature toward an anaphylaxis-sensitive phenotype. Murakami and colleagues show that PLA2G3, a mammalian homolog of the anaphylactic bee venom phospholipase A₂, regulates this process (p 554; News and Views by Philipp Starkl, Thomas Marichal & Stephen J. Galli, p 527). The original image, by Makoto Murakami, is a transmission electron micrograph of a mouse peritoneal mast cell. Artwork by Lewis Long.

Research and patents (p 523)

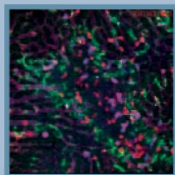




Dermal ILC2 cells (p 564)



Controlling phagosomes (p 543)

Enhancing CTL proliferation
(pp 533 and 574)**564 Cutaneous immunosurveillance and regulation of inflammation by group 2 innate lymphoid cells**

Ben Roediger, Ryan Kyle, Kwok Ho Yip, Nital Sumaria, Thomas V Guy, Brian S Kim, Andrew J Mitchell, Szun S Tay, Rohit Jain, Elizabeth Forbes-Blom, Xi Chen, Philip L Tong, Holly A Bolton, David Artis, William E Paul, Barbara Fazekas de St Groth, Michele A Grimbaldston, Graham Le Gros & Wolfgang Weninger

574 Intrahepatic myeloid-cell aggregates enable local proliferation of CD8⁺ T cells and successful immunotherapy against chronic viral liver infection

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584 Deficiency in IL-17-committed V γ 4⁺ $\gamma\delta$ T cells in a spontaneous Sox13-mutant CD45.1⁺ congenic mouse substrain provides protection from dermatitis

Elizabeth E Gray, Francisco Ramrez-Valle, Ying Xu, Shuang Wu, Zhihao Wu, Klaus E Karjalainen & Jason G Cyster

593 The microRNA miR-155 controls CD8⁺ T cell responses by regulating interferon signaling

Donald T Gracias, Erietta Stelekati, Jennifer L Hope, Alina C Boesteanu, Travis A Doering, Jillian Norton, Yvonne M Mueller, Joseph A Fraietta, E John Wherry, Martin Turner & Peter D Katsikis

603 T cells maintain an exhausted phenotype after antigen withdrawal and population reexpansion

Daniel T Utzschneider, Amandine Legat, Silvia A Fuertes Marraco, Lucie Carrie, Immanuel Luescher, Daniel E Speiser & Dietmar Zehn

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611 Natural and inducible T μ 17 cells are regulated differently by Akt and mTOR pathways

Jiyeon S Kim, Tammarah Sklarz, Lauren B Banks, Mercy Gohil, Adam T Waickman, Nicolas Skuli, Bryan L Krock, Chong T Luo, Weihong Hu, Kristin N Pollizzi, Ming O Li, Jeffrey C Rathmell, Morris J Birnbaum, Jonathan D Powell, Martha S Jordan & Gary A Koretzky

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619 The transcriptional landscape of $\alpha\beta$ T cell differentiation

Michael Mingueneau, Taras Kreslavsky, Daniel Gray, Tracy Heng, Richard Cruse, Jeffrey Ericson, Sean Bendall, Matt Spitzer, Garry Nolan, Koichi Kobayashi, Harald von Boehmer, Diane Mathis, Christophe Benoist & the Immunological Genome Consortium

633 Identification of transcriptional regulators in the mouse immune system

Vladimir Jojic, Tal Shay, Katelyn Sylvia, Or Zuk, Xin Sun, Joonsoo Kang, Aviv Regev, Daphne Koller & the Immunological Genome Project Consortium

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NATURE IMMUNOLOGY CLASSIFIED

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