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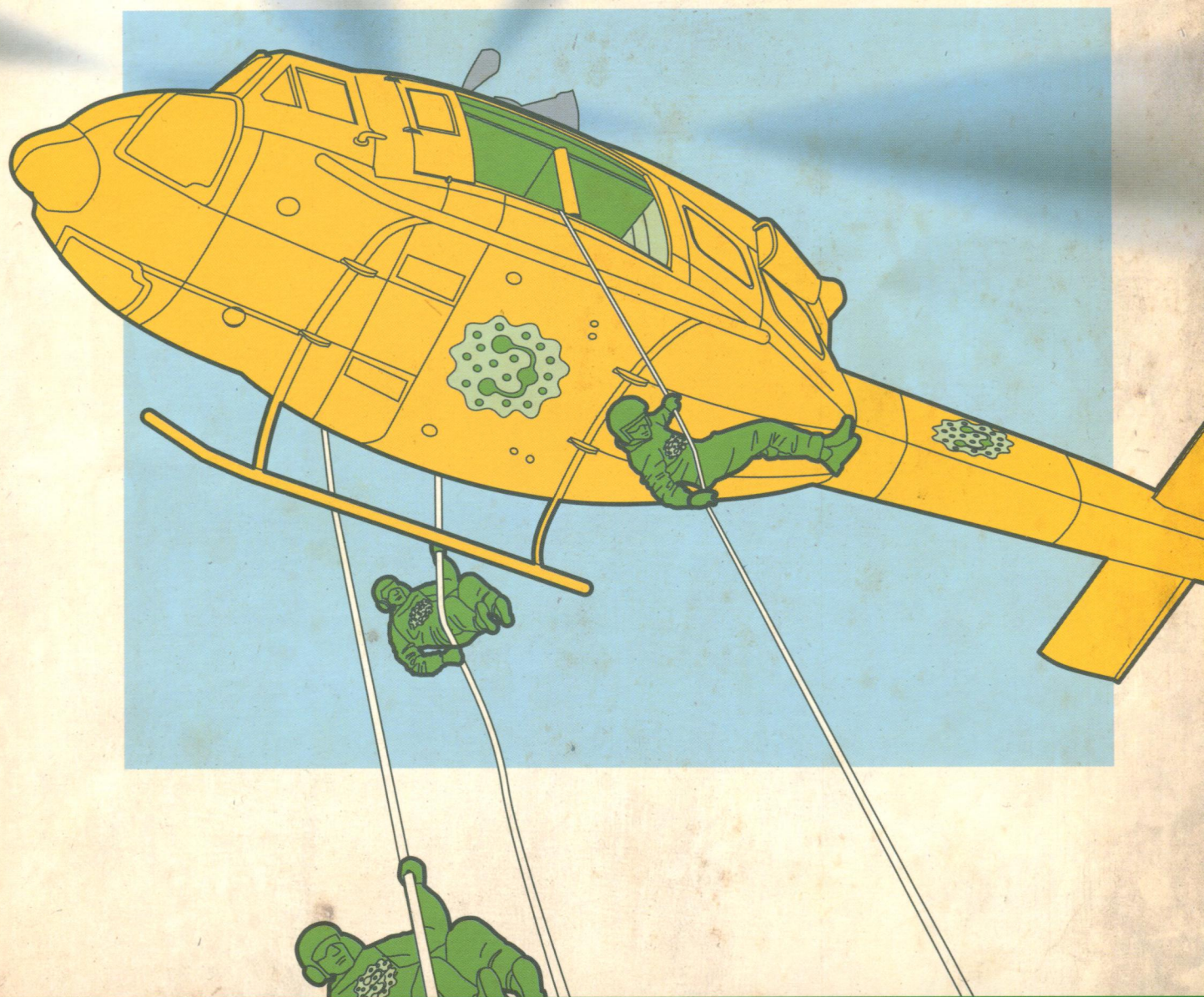
# Nature

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# REVIEWS

may 2014 volume 14 no. 5  
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# IMMUNOLOGY



## EMERGENCY SERVICES

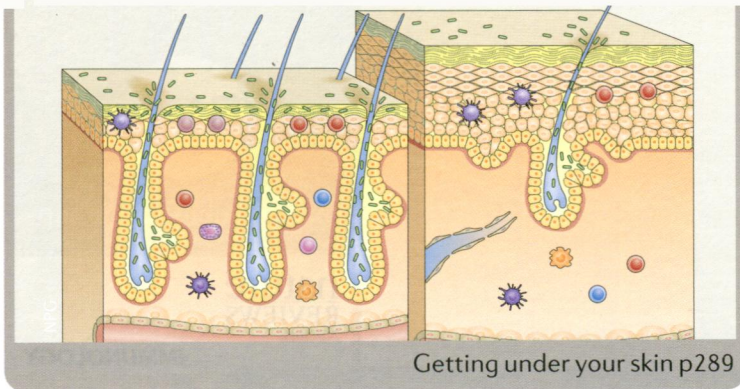
An amplification of granulopoiesis provides back-up during infection

## Air defence systems

How the innate immune system protects us from influenza virus

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## REVIEWS

### 289 Mechanisms regulating skin immunity and inflammation

*Manolis Pasparakis, Ingo Haase and Frank O. Nestle*

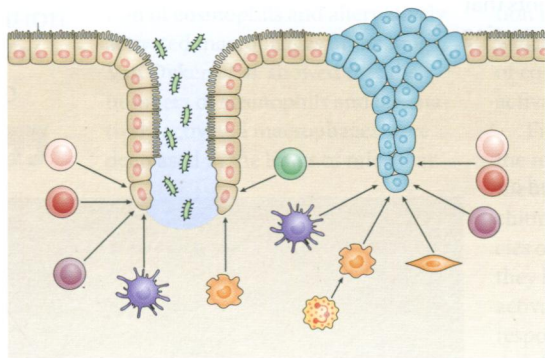
Immune homeostasis in the skin requires dynamic crosstalk between epithelial, stromal and immune cells, which is influenced by environmental insults and commensal microorganisms. Here, the authors highlight recent studies that provide an insight into the immunoregulatory mechanisms that mediate host defence and prevent chronic inflammation in the skin.

### 302 Emergency granulopoiesis

FEATURED  
ARTICLE

*Markus G. Manz and Steffen Boettcher*

A summary of the molecular and cellular events that coordinate the markedly increased *de novo* production of neutrophils in response to systemic microbial infection.



### 315 Innate immunity to influenza virus infection

*Akiko Iwasaki and Padmini S. Pillai*

The recognition of influenza virus by multiple pattern recognition receptors initiates numerous defence mechanisms to control disease through their effects on antiviral resistance and disease tolerance. Here, the authors review these mechanisms and discuss how the treatment of influenza virus-initiated diseases should promote both of these protective strategies to improve host fitness.

### 329 Cytokines in inflammatory bowel disease

*Markus F. Neurath*

This Review covers the cellular sources and immune functions of the various cytokines that have been associated with inflammatory bowel disease (IBD). The author details how the dysregulated production of pro-inflammatory and anti-inflammatory cytokines can drive IBD pathology, and discusses the feasibility of targeting different cytokines for the future therapy of IBD.

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*Florent Ginhoux and Steffen Jung*

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*Ludger Klein, Bruno Kyewski, Paul M. Allen and Kristin A. Hogquist*

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- 287 **INFLAMMASOMES** Polymeric assembly

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### TIMELINE

#### 343 **FOXP3 and scurfy: how it all began**

*Fred Ramsdell and Steven F. Ziegler*

The molecular cloning of the forkhead box P3 (*FOXP3*) gene led to a renaissance in the field of suppressor T cells (now known as regulatory T cells). In this Timeline article, the authors describe the key events that demonstrated the importance of *FOXP3* in immune regulation, starting with the discovery of the scurfy mouse some 65 years ago.

#### 349 **The function of Fcγ receptors in dendritic cells and macrophages (erratum)**

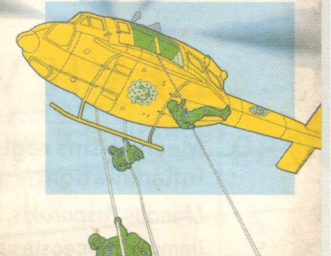
*Martin Guillems, Pierre Bruhns, Yvan Saeys, Hamida Hammad and Bart N. Lambrecht*



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**EMERGENCY SERVICES**  
An amplification of granulopoiesis provides back-up during infection

**Air defence systems**  
How the innate immune system protects us from influenza virus

► **COVER:** 'Call in the reserves' by Simon Bradbrook, inspired by the Review on p302.

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