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REVIEWS

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IMMUNOLOGY



IMMUNITY'S LITTLE HELPERS

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in innate immunity

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Location determines complement function p811

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FEATURED ARTICLE

The IL-20 subfamily of cytokines — from host defence to tissue homeostasis

Sascha Rutz, Xiaoting Wang and Wenjun Ouyang

This Review describes the biology of the interleukin-20 (IL-20) subfamily of cytokines. The authors detail the cellular sources and targets of these cytokines, and explain their key roles in promoting immunity to infections and driving tissue repair. They also discuss the emerging roles for IL-20 subfamily cytokines in metabolism and tumour immunology.

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Immunity in *Drosophila melanogaster* — from microbial recognition to whole-organism physiology

Nicolas Buchon, Neal Silverman and Sara Cherry

Being able to use *Drosophila melanogaster* to study immunity on a whole-organism level is proving to be highly valuable in deciphering the links between systemic metabolic and hormonal changes and the immune response. Here, the authors describe the insights gained so far into organism-wide immune regulation and the future directions for research in *D. melanogaster*.

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Complement — tapping into new sites and effector systems

Martin Kolev, Gaelle Le Friec and Claudia Kemper

Recent studies have shown that complement activation is not confined to the serum but also occurs within cellular compartments. This has led to an emerging understanding that complement components can intersect diverse cellular metabolic and effector pathways. Here, the authors propose that the different locations of complement activation dictate its diverse functions.

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SMOCs: supramolecular organizing centres that control innate immunity

Jonathan C. Kagan, Venkat Giri Magupalli and Hao Wu

This Opinion article proposes that higher-order protein complexes — referred to as supramolecular organizing centres (SMOCs) — form on specific organelles by nucleated polymerization downstream of innate immune receptors to amplify the signal and reach a response threshold.

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Host–microorganism interactions in lung diseases

Benjamin J. Marsland and Eva S. Gollwitzer

The recent realization that the airways harbour a steady-state microbiota necessitates a shift in our understanding of respiratory health and disease, drawing from similarities with host–microorganism relationships in the intestines.

On the web www.nature.com/reviews/immunol

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Links to further information

The full text of articles includes author biographies, links to glossary terms and links to websites and databases with relevant information.

Key points provides a bullet-pointed summary of the main topics covered in each article.

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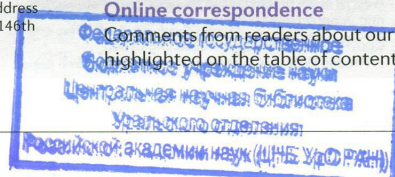
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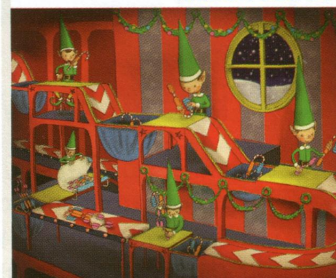
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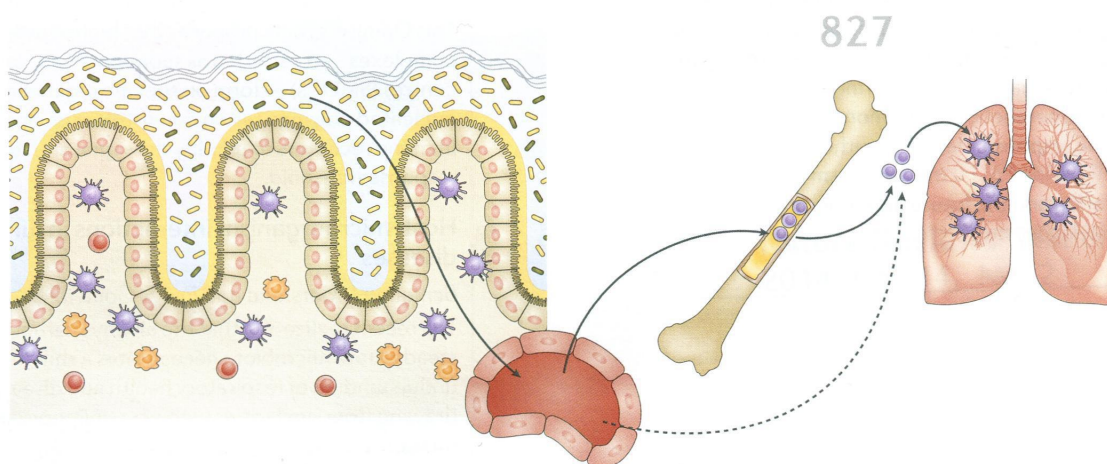


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► **COVER:** 'Immunity's little helpers' by Simon Bradbrook, inspired by the Review on p821.

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