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► **COVER:** 'Ultimate multimer' by Simon Bradbrook, inspired by the Perspective on p551.



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Welcome to the August issue of *Nature Reviews Immunology*. Immunologists use a number of techniques to gather information on their topics of interest. One of the best methods that exists for 'spying' on immune cells is the use of peptide–MHC multimers to track rare, antigen-specific T cells. In our featured article this month, Mark Davis, John Altman and Evan Newell detail the past achievements in this field and explain what we can hope to learn from future studies using this technique.

Pathogens are also important tools for increasing our knowledge of immune functions. Lloyd Miller and John Cho (page 505) describe new insights into immunity to cutaneous *Staphylococcus aureus* infections, while Alan Rothman (page 532) details the protective and pathological roles of the immune system during dengue virus infection. Both Reviews discuss the progress that is being made in developing vaccines against these pathogens.

On page 519, Alberto Mantovani and colleagues discuss how immunologists are continuing to uncover new functions for neutrophils. As well as providing early protection against a multitude of infectious agents, neutrophils are important for protecting us from cancer. However, sometimes these cells turn 'rogue': the authors discuss how neutrophils can also contribute to autoimmune and chronic inflammatory responses.

Finally, in our Viewpoint article on page 558, five experts from the field discuss plasmacytoid dendritic cells, debating their nomenclature, functions and therapeutic potential.

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Printed in Wales by Cambrian Printers

on acid-free paper