



nature publishing group



► **COVER:** 'Interlocking Shapes' by Neil Smith; inspired by the Reviews on p9 and p44



ELAINE BELL



KAREN HONEY



KIRSTY MINTON



LUCY BIRD

Over the past few years, everyone's expectations of what web sites can do have increased tremendously. In response to these increased expectations, we have redesigned our web site, and we hope that the 'new look' *Nature Reviews Immunology* web site, which was launched at the beginning of December, has made our content more accessible. As you can see in this issue of 2006, we have also redesigned our print copy to achieve the same goal.

Sensing and responding to changes in the environment is not the sole preserve of *Nature Reviews Immunology*, and in this issue, we have four articles on receptors that are used by cells of the immune system to sense their environment. On page 33, Gordon Brown discusses how recognition of  $\beta$ -glucan carbohydrates that are present mainly in the cell walls of fungi by the cell-surface receptor dectin-1 affects the immune system. Recognition of microbial components also occurs intracellularly, and on page 9, Warren Strober and colleagues review the signalling pathways that emanate from the nucleotide-binding oligomerization domain (NOD) proteins NOD1 and NOD2 (which are intracellular sensors of bacterial peptidoglycan) and discuss how mutant forms of these proteins might result in disease.

In contrast to sensors of microbial components, the signalling lymphocytic activation molecule (SLAM) family of receptors mediates homotypic interactions. On page 56, André Veillette discusses the mechanisms by which SLAM family receptor ligation is signalled to the cell and how defects in these signalling pathways are associated with immune defects.

On page 44, Christopher Glass and Sumito Ogawa discuss how signalling through nuclear receptors, in particular the glucocorticoid receptor, the peroxisome-proliferator-activated receptors (PPARs) and the liver X receptors, modulates inflammation and immunity.

**EDITORIAL OFFICES**

**LONDON** NatureReviews@nature.com  
The Macmillan Building, 4 Crinan Street,  
London N1 9XW, UK  
Tel: +44 (0)20 7843 3620;  
Fax: +44 (0)20 7843 3629

**CHIEF EDITOR:** Elaine Bell  
**SENIOR EDITORS:** Karen Honey, Kirsty Minton  
**ASSOCIATE EDITOR:** Lucy Bird

**ASSISTANT EDITOR:** Davina Dadley-Moore

**COPY EDITOR:** Claire Roberts  
**ART EDITOR:** Neil Smith  
**ART CONTROLLER:** Nicola Hawes

**SENIOR ART EDITORS:**  
Claudia Bentley, Susanne Harris

**EDITORIAL SUPPORT MANAGER:**  
Emma Green  
**MANAGING PRODUCTION EDITOR:**  
Judith Shadwell

**DEPUTY PRODUCTION EDITOR:**  
Simon Fenwick

**PRODUCTION CONTROLLER:** Natalie Smith

**EDITORIAL ASSISTANTS:**

Mary Aboukhalil, Elliann Fairbairn  
**WEB PRODUCTION EDITORS:**  
Catherine Alexander, Angela Bird, June Lim,  
Nadia Younus

**DEPUTY WEB PRODUCTION MANAGER:**  
Alexander Thurrell

**MARKETING MANAGERS:**  
Anna Duguid, Kellie Lane

**MANAGEMENT OFFICES**

**LONDON** nature@nature.com  
The Macmillan Building, 4 Crinan Street,  
London N1 9XW, UK  
Tel: +44 (0)20 7833 4000;  
Fax: +44 (0)20 7843 4596/7

**OFFICE MANAGER:** Sheryl Ocampo  
**PUBLISHER:** Hugh Blackburn  
**MANAGING DIRECTOR:** Annette Thomas  
**EDITOR-IN-CHIEF, NATURE PUBLICATIONS:**  
Philip Campbell

**ASSOCIATE DIRECTORS:**  
Jenny Henderson, Tony Rudland

**EDITORIAL PRODUCTION DIRECTOR:**

James McQuat  
**PRODUCTION MANAGER:** Yvonne Strong  
**WEB PRODUCTION MANAGER, UK:**  
Amanda Ward

**ASSOCIATE DIRECTOR, WEB PUBLISHING:**  
Timo Hannay

**HEAD OF WEB PRODUCTION:**  
Jeremy Macdonald

**NEW YORK** nature@natureny.com  
Nature Publishing Group, 75 Varick Street,  
9th floor, New York, NY 10013-1917, USA  
Tel: +1 212 726 9200;  
Fax: +1 212 696 9006

**CHIEF TECHNOLOGY OFFICER:**  
Howard Ratner

**DIRECTOR OF NEW TECHNOLOGY:**  
Greg Suprock

**HEAD OF WEB SERVICES:** Anthony Barrera  
**NATUREJOBS PUBLISHER:** Ben Crowe  
**HEAD OF NATURE RESEARCH & REVIEWS**  
**MARKETING:** Sara Girard

**TOKYO** nature@naturejpn.com  
Chiyoda Building 5F, 2-37-1 Ichigayatamachi,  
Shinjuku-ku, Tokyo 162-0843, Japan  
Tel: +81 3 3267 8751;  
Fax: +81 3 3267 8746

**ASIA-PACIFIC PUBLISHER:**  
Antoine E Bocquet

**MANAGER:** Koichi Nakamura

**ASIA-PACIFIC SALES DIRECTOR:**

Kate Yoneyama

**SENIOR MARKETING MANAGER:**

Peter Yoshihara

**MARKETING/PRODUCTION MANAGER:**

Takesh Murakami

**INDIA** 5A/12 Ansari Road, Daryaganj,

New Delhi 110 002, India

Tel/Fax: +91 11 2324 4186

**SALES AND MARKETING MANAGER, INDIA:**

Harpal Singh Gill

Copyright © 2006 Nature Publishing Group

Printed in the UK by The Friary Press

on acid-free paper