



nature publishing group



► **COVER:** 'Entrepreneurship in pharmaceutical R&D' by Susanne Harris, inspired by the Perspective on p683.

Could creating a research environment analogous to that of a small biotechnology company help to revitalize innovation in large pharmaceutical companies? This question, which has been an important consideration in the restructuring of research and development (R&D) at several companies, is among those investigated in a Perspective article on entrepreneurship in the pharmaceutical industry this month from Douglas and colleagues, based on interviews with 26 leaders of R&D at pharmaceutical and biotechnology companies. Our second Perspective this month, by Drag and Salvesen, discusses how new insights into protease biology and structure are shaping emerging approaches to identifying therapeutic inhibitors, such as targeting allosteric sites, which could help in developing novel drugs for treating cancer and inflammatory diseases, among others. Approaches to targeting chronic inflammatory diseases, such as rheumatoid arthritis, are also considered in a Review by Kopf and colleagues, who highlight the potential of recent insights into cytokine networks and technical progress in blocking cytokines *in vivo* to lead to improved therapeutics. An emerging strategy for treating inflammatory disorders — harnessing the properties of carbon monoxide (CO) gas and CO-releasing molecules — is among the applications of the molecules highlighted by Motterlini and Otterbein, who outline the role of CO as an endogenous cytoprotective and homeostatic molecule and review its beneficial effects in preclinical models of a range of diseases. Finally, Ostrosky-Zeichner and colleagues give an overview of the most promising small molecules in the antifungal pipeline and discuss how improved diagnostics and new developments in vaccines and antibody-based immunotherapy are offering alternative strategies for tackling invasive fungal infections.



PETER KIRKPATRICK



ALEXANDRA FLEMING



CHARLOTTE HARRISON



BETHAN HUGHES



MAN TSUEY TSE



KATIE KINGWELL

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: Peter Kirkpatrick
SENIOR EDITORS: Alexandra Fleming,
Charlotte Harrison, Sarah Crunkhorn
ASSOCIATE EDITOR: Monica Hoyos Flight
SENIOR NEWS EDITOR: Bethan Hughes
ASSISTANT EDITORS: Man Tsuey Tse,
Katie Kingwell
COPY EDITOR: Kate Hedigan
COPY EDITING MANAGER: Lewis Packwood
ART CONTROLLER: Susanne Harris
SENIOR ART EDITORS: Vicky Summersby,
Patrick Morgan
MANAGING PRODUCTION EDITOR:
Judith Shadwell
SENIOR PRODUCTION EDITOR: Simon Fenwick
PRODUCTION CONTROLLER: Natalie Smith

EDITORIAL ASSISTANTS: Jacques Smit,
Laura Corns
WEB PRODUCTION MANAGER:
Deborah Anthony
MARKETING MANAGERS: Tim Redding,
Samantha Savallo

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: Laura Firman
PUBLISHING DIRECTOR: Peter Collins
MANAGING DIRECTOR:
Steven Inchcombe
EDITOR-IN-CHIEF, NATURE PUBLICATIONS:
Philip Campbell
ASSOCIATE DIRECTORS: Jenny Henderson,
Dominic Pettit
EDITORIAL PRODUCTION DIRECTOR:
James McQuat

PRODUCTION DIRECTOR:

Yvonne Strong
DIRECTOR, WEB PUBLISHING: Dan Pollock
HEAD OF WEB PRODUCTION:
Alexander Thurrell
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 (BIOPHARMA): Melanie Brazil
CHIEF TECHNOLOGY OFFICER:
Howard Ratner
HEAD OF INTERNAL SYSTEMS DEVELOPMENT:
Anthony Barrera
HEAD OF SOFTWARE SERVICES:
Luigi Squillante
**GLOBAL HEAD OF ADVERTISING AND
SPONSORSHIP:** Dean Sanderson
**HEAD OF NATURE RESEARCH & REVIEWS
MARKETING:** Sara Girard

TOKYO nature@natureasia.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 SA/12 Ansari Road, Daryaganj,
New Delhi 110 002, India
Tel/Fax: +91 11 2324 4186
SALES AND MARKETING MANAGER, INDIA:
Harpal Singh Gill
Copyright © 2010 Nature Publishing Group
Research Highlight images courtesy of
Getty Images unless otherwise credited.
Printed in Wales by Cambrian Printers on
acid-free paper