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► **COVER:** 'Molecular imaging' inspired by the Review on p591.



PETER KIRKPATRICK



ALEXANDRA FLEMMING



CHARLOTTE HARRISON



SARAH CRUNKHORN



BETHAN HUGHES



MONICA HOYOS FLIGHT

Specialty pharmaceuticals — drugs that are prescribed mainly by specialists — are attracting increasing attention from companies that have traditionally focused on products prescribed by primary-care physicians. In their Perspective, Ma and colleagues provide an analysis of marketed specialty products, identifying specific factors that are most influential in determining their success. Recent technological advances are aiding the application of genetic information for the prediction of drug response, and in the second perspective this month, Weiss and colleagues consider key factors and challenges in the development and performance of accurate and clinically meaningful pharmacogenetic tests. Identifying those patients that are most likely to benefit from a particular therapy may also be aided by molecular imaging techniques. In their Review, Gambhir and colleagues discuss the applications and associated challenges of molecular imaging in all phases of drug development, focusing on its use in the oncology field. Among the many clinically successful anticancer agents, there are a number of macrocyclic natural products. However, despite their proven success in oncology as well as in various other disorders, the therapeutic potential of macrocycles remains relatively under-explored. The pharmacologically favourable properties and features offered by this class of compounds are reviewed by Terrett and colleagues, who predict rapid growth in the therapeutic application of synthetic macrocyclic compounds in the near future. The development of agents targeting the purinergic system is another growing field of pharmaceutical research. In our final review, Burnstock overviews the roles of purinergic signalling in disorders of the central nervous system, providing insight into which specific purinergic receptor subtypes represent promising therapeutic targets, particularly in the treatment of pain, as well as neuropsychiatric and neurodegenerative diseases.

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

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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

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NEW YORK nature@natureny.com

Nature Publishing Group,
75 Varick Street, 9th floor, New York,
NY 10013-1917, USA

Tel: +1 212 726 9200;

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TOKYO nature@natureasia.com

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Shinjuku-ku, Tokyo 162-0843, Japan

Tel: +81 3 3267 8751; Fax: +81 3 3267 8746

ASIA-PACIFIC PUBLISHER: Antoine E Bocquet

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Printed in Wales by Cambrian Printers on

acid-free paper