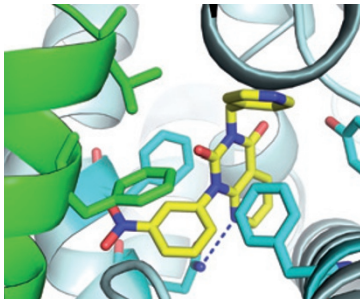
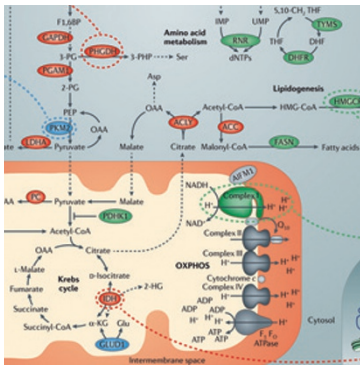
IN THIS ISSUE



Inhibitors of cyclic nucleotide phosphodiesterases p290



Poster: Metabolic targets for cancer therapy

The discovery of the aquaporin family of proteins in the 1990s resolved a long-standing debate about how water is transported across cell membranes. More recent data indicate that aquaporins could be targeted to treat disorders including oedema and obesity, and these therapeutic opportunities as well as challenges such as the development of appropriate assays for aquaporin modulators are discussed in a Review by Verkman and colleagues. In the second Review, Wagner *et al.* focus on therapeutic approaches to restore the function of insulin-secreting β-cells, which are destroyed by the immune system in patients with type 1 diabetes, and have reduced functionality in those with type 2 diabetes. Various approaches are discussed, including promoting insulin secretion, inhibiting apoptosis of β-cells or stimulating their proliferation. Cyclic nucleotide phosphodiesterases (PDEs), the subject of a Review by Manganiello and colleagues, regulate a plethora of biological activities through their effects on concentrations of the key signalling mediators cAMP and cGMP. Consequently, PDE inhibitors can be used to treat numerous diseases such as erectile dysfunction and pulmonary hypertension, and are in development for many more. In particular, the next generation of inhibitors aim to exploit emerging knowledge indicating that PDEs regulate specific pathways through the formation of multiprotein complexes with different molecular compositions in specific subcellular compartments. Finally, this month we are featuring a poster illustrating metabolic targets for cancer therapy. The poster was produced with exclusive support from Forma Therapeutics and is freely available at http://www.nature.com/nrd/posters/index.html. As always, Nature Publishing Group carries sole responsibility for all editorial content.

EDITORIAL & PRODUCTION OFFICE
The Macmillan Building,
4 Crinan Street, London N1 9XW, UK
Tel: +44 (0)20 7843 3620
Email: NatureReviews@nature.com
www.nature.com/reviews/drugdisc

CHIEF EDITOR Peter Kirkpatrick
SENIOR EDITORS Alexandra Flemming, Charlotte Harrison, Sarah Crunkhorn
ASSOCIATE EDITOR Megan Cully
ASSISTANT EDITORS Katie Kingwell, Natasha Bray
SENIOR COPY EDITOR (NRD) Mariam Faruqi
ART CONTROLLER Susanne Harris
COPY EDITING MANAGER Catriona Rodwell
EDITORIAL ASSISTANTS Emily Finn, Rebecca Cromie
MANAGING PRODUCTION EDITOR Judith Shadwell
SENIOR PRODUCTION EDITOR Simon Fenwick
SENIOR ART EDITORS Patrick Morgan, Vicky Summersby
PRODUCTION CONTROLLER Natalie Smith
PUBLISHER (BIOPHARMA) Melanie Brazil

CUSTOMER SERVICES www.nature.com/help
PERSONAL SUBSCRIPTIONS subscriptions@nature.com
REPRINTS www.nature.com/reprints
ADVERTISING & SPONSORSHIP www.nature.com/advertising
SITE LICENCES www.nature.com/libraries/site_licenses/index.html
PRESS OFFICE press@nature.com
MARKETING marketing@nature.com

MANAGEMENT OFFICES
NPG LONDON The Macmillan Building, 4 Crinan Street, London N1 9XW, UK. Tel: +44 (0)20 7833 4000
NPG NEW YORK 75 Varick Street, 9th floor, New York, NY 10013-1917, USA. Tel: +1 212 726 9200
NPG ASIA-PACIFIC Chiyoda Building 2-37 Ichigayatamachi, Shinjuku-Ku, Tokyo 16200843, Japan. Tel: +1 212 726 9200
A list of other offices can be found at www.nature.com/npg_/contact/offices.html

Printed in Wales by Cambrian Printers on acid-free paper.

EDITORS

PETER KIRKPATRICK

ALEXANDRA FLEMMING

CHARLOTTE HARRISON

MEGAN CULLY

KATIE KINGWELL

NATASHA BRAY