



nature publishing group



► **COVER:** 'Happy Movember!' by Lara Crow, inspired by 'Movember', which promotes awareness of male-specific cancers through the growth of facial hair during November.



NICOLA MCCARTHY



GEMMA ALDERTON



SARAH SETON-ROGERS



DARREN BURGESS

Post-translational modifications (PTMs) are indispensable for regulating protein function, and because of this several PTMs have been scrutinized as potential biomarkers or therapeutic targets. For example, the RAS family of proto-oncogenes, which are discussed on page 761 by Dafna Bar-Sagi and colleagues, are subject to lipid modification, which is known as prenylation. Prenylation, in the form of farnesylation and geranylgeranylation, has long been considered a target for cancer therapy, as discussed on page 775 by Norbert Berndt, Andrew D. Hamilton and Saïd M. Sebti. However, as these authors discuss, inhibiting this process is more effective in some tumours than in others.

Protein ubiquitylation is another PTM that can be targeted to induce cancer cell death. As Shigetsugu Hatakeyama outlines on page 792, the tripartite motif (TRIM) protein family is one of the subfamilies of the RING type E3 ubiquitin ligases, but the potential function of TRIM proteins in tumorigenesis might not be solely due to their possession of a RING domain. Another E3 ligase that is becoming of interest to cancer researchers is parkin, a protein that is mutated in Parkinson's disease. Germline homozygous mutations in *PARK2* are associated with early-onset Parkinson's disease, but somatic heterozygous mutation of *PARK2* is found in some human tumours, as discussed on page 812 by Nicholas W. Wood and colleagues. Links between this neurodegenerative disease and cancer should provide much food for thought.

Finally, PTMs also have a part in promoting cancer awareness: the growth of facial hair for Movember, to increase public knowledge about male cancers, is reflected in this month's cover, and Movember of course follows hard on the heels of a month of pink ribbons for breast cancer awareness. PTMs are definitely a hot (pink) topic!

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: Nicola McCarthy
SENIOR EDITORS: Gemma Alderton,
Sarah Seton-Rogers
ASSISTANT EDITOR: Darren Burgess
SENIOR COPY EDITOR (NRC): Catriona Rodwell
SENIOR COPY EDITORS: Yukie Ozawa,
Man Tsuey Tse, Lucie Wootton
COPY EDITING MANAGER: Lewis Packwood
ART EDITOR: Lara Crow
ART CONTROLLER: Susanne Harris
SENIOR ART EDITORS: Vicky Summersby,
Patrick Morgan, Kirsten Lee
MANAGING PRODUCTION EDITOR:
Judith Shadwell
SENIOR PRODUCTION EDITOR: Simon Fenwick
PRODUCTION CONTROLLER: Natalie Smith

SENIOR EDITORIAL ASSISTANT: Laura Corns
EDITORIAL ASSISTANT: Ella Lines
WEB PRODUCTION MANAGER: Deborah Anthony
MARKETING MANAGERS: Tim Redding,
Leah Rodriguez

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 Lee
MANAGING EDITOR: Suzanne Farley
PUBLISHER: James Butcher
MANAGING DIRECTOR:
Steven Inchcoombe
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 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

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 © 2011 Nature Publishing Group

Research Highlight images courtesy of

Getty Images unless otherwise credited.

Printed in Wales by Cambrian Printers

on acid-free paper