



nature publishing group



► **COVER:** 'Tension' by Lara Crow, inspired by the Review on p108.



NICOLA MCCARTHY



SARAH SETON-ROGERS



GEMMA ALDERTON



MEERA SWAMI

Depending on where you started your research career, perhaps in the tissue culture laboratory, or producing a mouse model, or indeed in the clinic, your perception of which biological changes are important in tumorigenesis is probably skewed in a specific direction. Despite this, we can still overlook basic biological facts that were on our radars during college but have been forgotten amid the complexity of tumour biology and the specialization that research requires.

One good example is the effect that the stiffness of a given tissue has on the cells within the tissue, something that is addressed by Valerie Weaver and colleagues on [page 108](#) of this issue. Cells respond to a variety of physiological mechanical stimuli by altering their shape, function or gene expression profiles. Such changes seem to be important in cancer biology — breast tumours are significantly stiffer than the normal surrounding breast tissue. Thus, understanding how cells sense mechanical changes in both normal and tumour tissue might identify new pathways that can be exploited in the clinic.

We also tend to forget that cells not only respond to stimuli by altering morphology and gene expression, but also by secreting particular factors. On [page 81](#) Thomas Kuilman and Daniel Peeper outline the factors that are secreted by senescent cells and how these might function to promote senescence and limit tumorigenesis. They also speculate on whether the production of specific secreted factors might alert other cells within the tissue to the need to enter a senescent state.

Although it is important to focus in on the function of a specific protein or gene during cancer development, it is also crucial to place this in the wider context of changes that occur in the tissue as the tumour develops.

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
ASSOCIATE EDITORS: Sarah Seton-Rogers,
Gemma Alderton
ASSISTANT EDITOR: Meera Swami
SENIOR COPY EDITOR (NRC): Isobel Barry
SENIOR COPY EDITORS: Craig Nicholson,
Man Tsuey Tse, Gillian Young
ART EDITOR: Lara Crow
ART CONTROLLER: Susanne Harris
SENIOR ART EDITORS: Vicky Askew,
Patrick Morgan
MANAGING PRODUCTION EDITOR:
Judith Shadwell
SENIOR PRODUCTION EDITOR:
Simon Fenwick
PRODUCTION CONTROLLER: Natalie Smith

SENIOR EDITORIAL ASSISTANT: Laura Firman
EDITORIAL ASSISTANT: Jacques Smit
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: Kiersty Darnell
PUBLISHER: Stephanie Diment
MANAGING DIRECTOR: Steven Inchcoombe
EDITOR-IN-CHIEF, NATURE PUBLICATIONS:
Philip Campbell
ASSOCIATE DIRECTORS:
Jenny Henderson, Tony Rudland
EDITORIAL PRODUCTION DIRECTOR:
James McQuat
PRODUCTION DIRECTOR: Yvonne Strong

DIRECTOR, WEB PUBLISHING: Timo Hannay
HEAD OF WEB PRODUCTION:
Alexander Thurrell

NATUREJOBS PUBLISHER: Della Sar

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

HEAD OF GLOBAL ADVERTISING, SALES AND

SPONSORSHIP: Dean Sanderson

HEAD OF NATURE RESEARCH & REVIEWS

MARKETING: Sara Girard

BUSINESS DEVELOPMENT EXECUTIVE:

David Bagshaw

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:
Takeshi 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 © 2009 Nature Publishing Group
Research Highlight images courtesy of
Getty Images unless otherwise credited.
Printed in Wales by Cambrian Printers
on acid-free paper