

# nature

## INDEX 2014

### GLOBAL

NATURE, VOL. 515, NO. 7526 (13 NOVEMBER 2014)

COVER ART: JASIEK KRZYSZTOFIAK

This first edition of the Nature Index 2014 Global supplement provides a snapshot of results from the new Nature Index. In this supplement, we turn a spotlight on the countries and institutions around the world that contributed to some of the highest quality research over the previous calendar year.

The Nature Index provides a new way to look at the scientific literature — and to those research organizations that contribute to it. By looking at articles from only a small group of journals, most favoured by the scientific community as a place to publish their best research, we hope to provide a new level of analysis that is more targeted and hence more malleable. We want users to be able to tease out patterns of research, look at trends, analyse individual strengths, and investigate how institutions and countries collaborate. The story behind the Nature Index is outlined on page S52.

In this supplement, our analysis includes layers of information from other data sources, for example demographics, national spend on research and development, changes to science policy and funding, and even altmetrics (online and social media coverage), which help put the Nature Index data into perspective. The top level, global results can be seen on page S56.

Drilling down by region (starting with North America on page S60),

we highlight the most interesting patterns in research output in this snapshot of the Nature Index. Within each region, we try to identify national hotspots for high-quality research, based not just on output quantity but also on a range of indicators — for example, the number of researchers and the ratio of collaborators — that help put the data in context and allow a more nuanced view of these patterns.

Focusing down further, we look at some of the notable institutions in each country, and use the Nature Index data to compare and contrast between them, aiming to tease out specific institutional strengths.

Above all, our hope is that this supplement, rather than providing some authoritative analysis, will act as a conversation starter and a nucleation point for ideas for further analysis. Every reader of this supplement and user of [natureindex.com](http://natureindex.com) will have their own specific interests and questions they want to address. We encourage use of the freely-available data to do just that. And we hope the conversation we have started here will prove useful for researchers, institutions, analysts and policy-makers alike.

**Nick Campbell**  
*Executive Editor, Nature*

**Michelle Grayson**  
*Senior Editor, Nature Supplements*

## CONTENTS

- S52 INTRODUCING THE INDEX**  
How the index criteria were established
- S56 GLOBAL OVERVIEW**  
A world of achievement in graphics
- S60 NORTH AMERICA**  
Strides ahead despite flatline funding
- S66 NORTH & WESTERN EUROPE**  
Efficient, but struggling to collaborate
- S73 EAST & SOUTHEAST ASIA**  
Budgets and quality grow within a narrow focus
- S82 CENTRAL, EAST & SOUTH EUROPE**  
Physical science dominant amid shake-up
- S84 AUSTRALIASIA & PACIFIC ISLANDS**  
Australia does more with less
- S88 WEST ASIA**  
Dynamic science in region of upheaval
- S89 CENTRAL & SOUTH ASIA**  
A love affair with chemistry and physics
- S91 MIDDLE & SOUTH AMERICA**  
Reaching out for international partners
- S92 AFRICA**  
Heavily dependent on foreign funding
- S94 A GUIDE TO THE NATURE INDEX**  
How to get the best from the index
- S98 TABLES**

**EDITORIAL:** Herb Brody, Michelle Grayson, Rebecca Dargie, Victoria Kitchener, Stephen Pincock, Nicola Jones, Wilson da Silva, Eric Bender, Mohammed Yahia, Subhra Priyadarshini, Linda Nordling, Hepeng Jia, Rafael Garcia, Claire Ainsworth, Barbara Casassus.

**EDITORIAL SUPPORT:** Nobuko Miyairi, Larissa Kogleck. **ART & DESIGN:** Wesley Fernandes, Mohamed Ashour, Alisdair Macdonald, Andrea Duffy, Chris Gilloch. **WEB & DATA:** Bob Edenbach, Olivier Lechevalier, Yuxin Wang, Naomi Nakahara, Masamichi Wada, Jyoti Miglani, Akiko Murakami, Takeshi Ouchi, Maxime Fontaine, Jennie Pao. **PRODUCTION:** Sue Gray, Karl Smart, Ian Pope, Robert Sullivan. **MARKETING:** Hannah Phipps. **SALES:** Nils Moeller, Kate Yoneyama, Kylie Ahern, Janet Cen, Yuki Fujiwara, Maria Kubalova, Krystal Trenchfield, Stella Yan. **PROJECT MANAGER:** Anastasia Panoutsou. **ART DIRECTOR:** Kelly Buckheit Krause. **PUBLISHING:** Nick Campbell, Richard Hughes, David Swinbanks.

#### NATURE INDEX 2014 GLOBAL

The Nature Index 2014 Global, a supplement to *Nature*, is produced by Nature Publishing Group, a division of Macmillan Publishers Ltd. This publication is based on data from the Nature Index, a website maintained by Nature Publishing Group and made freely available at [natureindex.com](http://natureindex.com).

Nature Editorial Offices  
The Macmillan Building  
4 Crinan Street,  
London N1 9XW, UK  
Tel: +44 (0)20 7833 4000  
Fax: +44 (0)20 7843 4596/7

#### CUSTOMER SERVICES

To advertise with the Nature Index, please visit [natureindex.com/support](http://natureindex.com/support)  
[feedback@nature.com](mailto:feedback@nature.com)  
Copyright © 2014 Nature Publishing Group.  
All rights reserved.