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New York City. The United States is the only currently developed country projected to rank among the 10 most populous countries in 2050. Unlike many developed countries, the U.S. has a fertility rate slightly greater than replacement level, which provides balanced growth of youngsters, working-age adults, and elderly dependents. For our global coverage of population, see the special section beginning on p. 538 and at [www.scim.ag/pop2011](http://www.scim.ag/pop2011).

Image: Mitchell Funk/Getty Images

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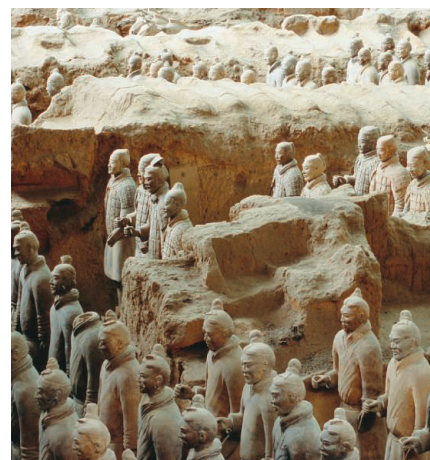
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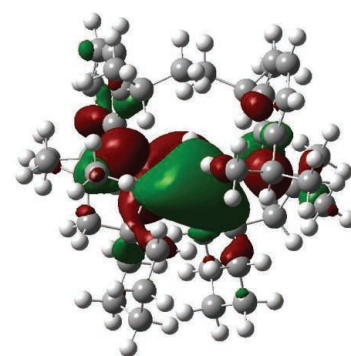
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## SCIENCEONLINE

## SCIENCEEXPRESS

[www.sciencexpress.org](http://www.sciencexpress.org)

### Isotopic Signature of N<sub>2</sub>O Produced by Marine Ammonia-Oxidizing Archaea

A. E. Santoro et al.

Archaea may account for the majority of marine nitrous oxide emissions to the atmosphere.  
10.1126/science.1208239

### A Neutralizing Antibody Selected from Plasma Cells That Binds to Group 1 and Group 2 Influenza A Hemagglutinins

D. Corti et al.

An antibody able to broadly neutralize both group 1 and group 2 influenza A viruses—and its target epitope—are identified.  
10.1126/science.1205669

### Nectins Establish a Checkerboard-Like Cellular Pattern in the Auditory Epithelium

H. Togashi et al.

Interactions between adhesion molecules support the checkerboard-like patterning of cells in the cochlea.  
10.1126/science.1208467

### Exome Sequencing of Head and Neck Squamous Cell Carcinoma Reveals Inactivating Mutations in *NOTCH1*

N. Agrawal et al.

10.1126/science.1206923

### The Mutational Landscape of Head and Neck Squamous Cell Carcinoma

N. Stransky et al.

The mutational profile of head and neck cancer is complex and may pose challenges to the development of targeted therapies.  
10.1126/science.1208130

## SCIENCE NOW

[www.sciencenow.org](http://www.sciencenow.org)

Highlights From Our Daily News Coverage

### How Blasts Injure the Brain

New findings may provide important clues to how explosions cause traumatic brain injury in soldiers.

<http://scim.ag/brainblasts>

>> *News story p. 514*

### A Submarine That Doesn't Make Waves

A new 'wake cloak' could eliminate drag on water vessels, making them operate as though they were in a vacuum.

<http://scim.ag/wakecloak>

### Heavy Armor Gave Knights a Workout

Physiologists put armor-clad historical interpreters on a treadmill and measure how quickly they run out of steam.

<http://scim.ag/heavyarmor>

## SCIENCE SIGNALING

[www.sciencesignaling.org](http://www.sciencesignaling.org)

The Signal Transduction Knowledge Environment  
**26 July issue:** <http://scim.ag/ss072611>

### RESEARCH ARTICLE: Proteome-Wide Mapping of the *Drosophila* Acetylome Demonstrates a High Degree of Conservation of Lysine Acetylation

B. T. Weinert et al.

Comparing the acetylomes with the phosphoproteomes of flies and humans suggests that phosphorylation sites may have evolved faster than acetylation sites.

### RESEARCH ARTICLE: A Cell-Based High-Content Screening Assay Reveals Activators and Inhibitors of Cancer Cell Invasion

M. Quintavalle et al.

## PODCAST

S. A. Courtneidge and A. M. VanHook

Cyclin-dependent kinase 5 is identified as an anticancer target because its activity promotes invasiveness of cancer cells.

### PERSPECTIVE: Stem Cell Proliferation in the Skin— $\alpha$ -Catenin Takes Over the Hippo Pathway

E. R. Flores and G. Halder

$\alpha$ -Catenin inhibits the transcriptional coactivator Yap to limit epidermal stem cell proliferation.

## SCIENCE TRANSLATIONAL MEDICINE

[www.sciencetranslationalmedicine.org](http://www.sciencetranslationalmedicine.org)

Integrating Medicine and Science

**27 July issue:** <http://scim.ag/stm072711>

### COMMENTARY: Losing the War Against Obesity—The Need for a Developmental Perspective

P. D. Gluckman et al.

Recent scientific insights into early-life contributions to the adult obesity epidemic must now be translated into interventions.

>> *Population section p. 538 and www.scim.ag/pop2011*

### REVIEW: Assessing the Safety of Adjuvanted Vaccines

S. S. Ahmed et al.

Preclinical and clinical studies assess the risk of adverse events from vaccine adjuvants.

### RESEARCH ARTICLE: Photoactivated Composite Biomaterial for Soft Tissue Restoration in Rodents and in Humans

A. T. Hillel et al.

Photoactivated composite biomaterials demonstrate enhanced physicochemical properties for facial soft tissue reconstruction.

### RESEARCH ARTICLE: IL-7 Promotes T<sub>H</sub>1 Development and Serum IL-7 Predicts Clinical Response to Interferon- $\beta$ in Multiple Sclerosis

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High serum IL-7 predicts responsiveness of multiple sclerosis patients to IFN- $\beta$  therapy and indicates a T<sub>H</sub>1 cell-driven disease.

### RESEARCH ARTICLE: Targeting TLRs Expands the Antibody Repertoire in Response to a Malaria Vaccine

S. R. Wiley et al.

### PERSPECTIVE: Antibody Repertoire—Embracing Diversity

A. J. Pollard and A. V. S. Hill

Adjuvanted formulations expand the vaccine-induced antibody repertoires against a virus and a parasite.

## SCIENCE CAREERS

[www.sciencereers.org/career\\_magazine](http://www.sciencereers.org/career_magazine)

Free Career Resources for Scientists

### Science in Namibia

S. Gaidos

A new series highlights what it's like to do science in different parts of the world, starting with Namibia.  
[http://scim.ag/namibia\\_careers](http://scim.ag/namibia_careers)

>> *Population section p. 538 and www.scim.ag/pop2011*

### Experimental Error: The Gray Pride Parade

A. Ruben

Walk through the corridors of many scientific institutions and you'll see the results of decisions made by the hiring committee of 1962.  
[http://scim.ag/ee\\_graypride](http://scim.ag/ee_graypride)

## SCIENCE PODCAST

[www.sciencemag.org/multimedia/podcast](http://www.sciencemag.org/multimedia/podcast)

Free Weekly Show

On the 29 July *Science* Podcast: a special show all about population, from the major demographic shift of the Neolithic to the regional youth bulges of today.

>> *Population section p. 538 and www.scim.ag/pop2011*

## SCIENCE INSIDER

[news.sciencemag.org/scienceinsider](http://news.sciencemag.org/scienceinsider)

Science Policy News and Analysis

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