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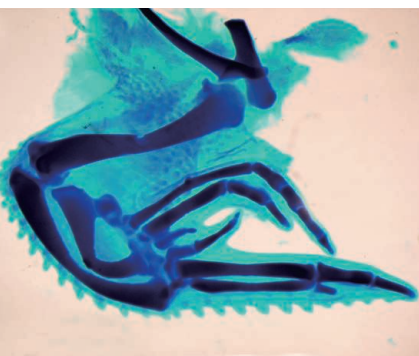
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Regulated deaggregation allows meningitis-causing bacteria to propagate to new host cells and migrate across epithelia.

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## SCIENCEONLINE



## SCIENTETALK

Join an online discussion about data use and access and take our reader poll, both part of this week's Dealing with Data special section at [www.sciencemag.org/special/data/](http://www.sciencemag.org/special/data/)

## SCIENCEEXPRESS

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

## The World's Technological Capacity to Store, Communicate, and Compute Information

*M. Hilbert and P. López*

An inventory of the world's technological capacity from 1986 to 2007 reveals the evolution from analog to digital technologies.

10.1126/science.1200970

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## Cortical Constriction During Abscission Involves Helices of ESCRT-III-Dependent Filaments

*J. Guizetti et al.*

The process by which animal cells are physically separated after cell division is dissected in molecular detail.

10.1126/science.1201847

## Different B Cell Populations Mediate Early and Late Memory During an Endogenous Immune Response

*K. A. Pape et al.*

A cell enrichment technique reveals the dynamics of the endogenous memory B cell response.

10.1126/science.1201730

## Tomography of Reaction-Diffusion Microemulsions Reveals Three-Dimensional Turing Patterns

*T. Bánsági Jr. et al.*

Tomography reveals three-dimensional Turing patterns created by the Belousov-Zhabotinsky reaction running in a microemulsion.

10.1126/science.1200815

## Dynamic Control of Chiral Space in a Catalytic Asymmetric Reaction Using a Molecular Motor

*J. Wang and B. L. Feringa*

Photoisomerization of a molecular catalyst changes its conformation and switches the chirality of its reaction product.

10.1126/science.1199844

## SCIENCENOW

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

## Highlights From Our Daily News Coverage

What Did George Washington Really Look Like? Computer analysis allows researchers to reconstruct pre-photography faces.

<http://scim.ag/gw-portrait>

New Zealand's Lost-and-Found Pink Terraces Geologists rediscover a natural wonder drowned for over a century.

<http://scim.ag/pink-terrace>

## Convince Your Friends You're a Genius With Two Cans and Some Sand

A simple physics experiment highlights the surprising nature of granular materials.

<http://scim.ag/sand-trick>

## SCIENCE SIGNALING

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

The Signal Transduction Knowledge Environment

**8 February issue:** <http://scim.ag/ss020811>

**RESEARCH ARTICLE:** The Crystal Structure of a Self-Activating G Protein  $\alpha$  Subunit Reveals Its Distinct Mechanism of Signal Initiation

*J. C. Jones et al.*

The *Arabidopsis* G protein  $\alpha$  subunit exhibits properties necessary and sufficient for receptor-independent activation.

**PERSPECTIVE:**  $G\alpha_q$  and Phospholipase C- $\beta$ —Turn On, Turn Off, and Do It Fast

*E. M. Ross*

A crystal structure illuminates reciprocal regulation between a G protein and its effector.

**PERSPECTIVE:** How Cells Use Pseudopods for Persistent Movement and Navigation

*P. J. M. Van Haastert*

A model of pseudopod formation, splitting, and persistence describe how cells migrate.

## GLOSSARY

Find out what MAX, FRK, and TIMP mean in the world of cell signaling.

## SCIENCE TRANSLATIONAL MEDICINE

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

Integrating Medicine and Science

**9 February issue:** <http://scim.ag/stm020911>

**COMMENTARY:** Power to the People—Participant Ownership of Clinical Trial Data

*S. F. Terry and P. F. Terry*

The time has come to crowd-source data for diagnostic and therapeutics development.

**COMMENTARY:** Electronic Consent Channels—Preserving Patient Privacy Without Handcuffing Researchers

*R. H. Shelton*

Policy-makers, researchers, and information technology leaders can help transform how we protect and use patient data.

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**RESEARCH ARTICLE:** Photodynamic Ablation of Lymphatic Vessels and Intralymphatic Cancer Cells Prevents Metastasis

*T. Tammela et al.*

Photodynamic therapy suppresses metastasis by eradicating both the in-transit tumor cells and their conduit to distant tissues.

**RESEARCH ARTICLE:** 5-Lipoxygenase Metabolite 4-HDHA Is a Mediator of the Antiangiogenic Effect of  $\omega$ -3 Polyunsaturated Fatty Acids

*P. Sapieha et al.*

In mice, certain fatty acids in the diet are converted to a metabolite that blocks destructive vessel growth similar to diabetic retinopathy.

## SCIENCE CAREERS

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

Free Career Resources for Scientists

**More Than Words:** Biomedical Ontologies Provide New Scientific Opportunities

*C. Wald*

Biomedical ontology is growing as an informatics specialty, and ontologies are proving to be powerful software and data-mining tools.

**Surfing the Tsunami**

*E. Pain*

Scientists in many disciplines need informatics and computational skills to exploit the increasingly vast quantities of available data.

**Sharing Data in Biomedical and Clinical Research**

*K. Travis*

It's not always clear how or where to share raw data, particularly when it includes patient information.

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[www.sciencemag.org/special/data/](http://www.sciencemag.org/special/data/)

## SCIENCE PODCAST

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