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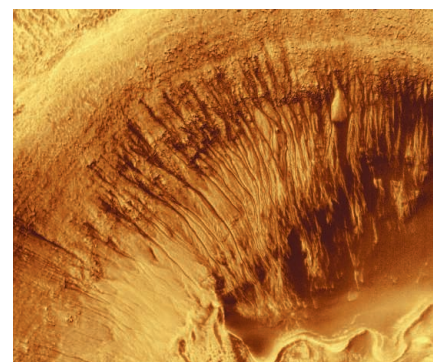
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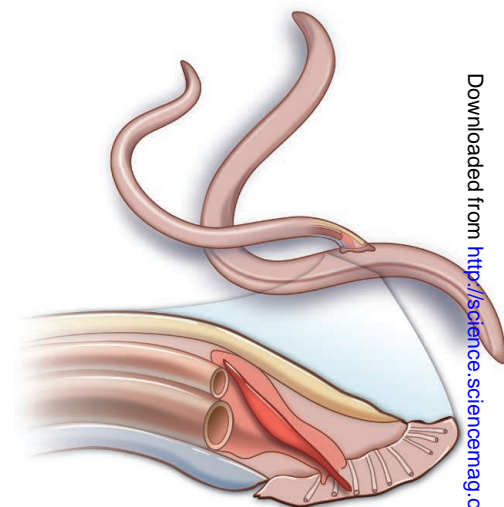
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False-colored scanning electron microscopy image of innate immune cells and the parasite *Trypanosoma brucei* (purple; length: 15 micrometers) in an infected mouse liver. The parasite is transmitted between mammalian hosts, including humans, by the bite of infected tsetse flies and is responsible for human sleeping sickness, a lethal disease that is a serious problem in Africa. See page 463.

Image: Gilles Vanwalleghem, Daniel Monteyne, Etienne Pays, and David Pérez-Morga, Laboratory of Molecular Parasitology and Center for Microscopy and Molecular Imaging, Université Libre de Bruxelles, Gosselies, Belgium

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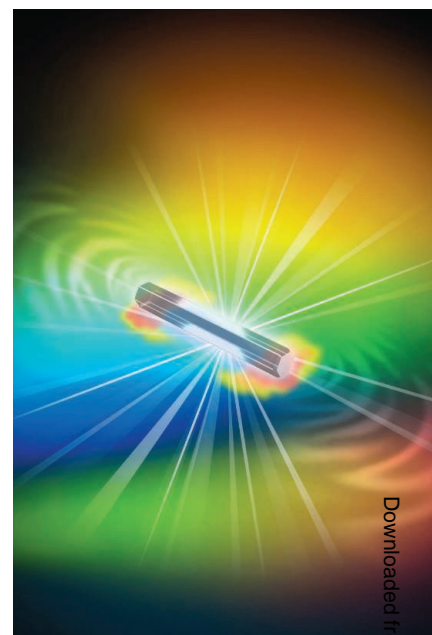
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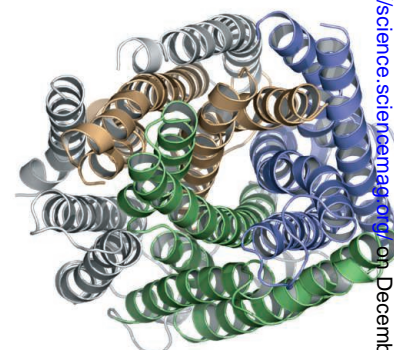
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UV Dosage Levels in Summer: Increased Risk of Ozone Loss from Convectively Injected Water Vapor

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Convective injection of water vapor into the stratosphere increases the rate of ozone destruction there.

10.1126/science.1222978

A Mechanism of Extreme Growth and Reliable Signaling in Sexually Selected Ornaments and Weapons

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Rhinoceros beetle horns, a sexually selected weapon, are more sensitive to nutrition and reliably indicate male quality.

10.1126/science.1224286

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Identification of the Cdc48•20S Proteasome as an Ancient AAA+ Proteolytic Machine

D. Barthelme and R. T. Sauer

The AAA+ enzyme Cdc48 combines with the 20S peptidase to function as an alternative type of proteasome.

10.1126/science.1224352

Compartmentalized Control of Skin Immunity by Resident Commensals

S. Naik et al.

The skin microbiota plays a selective role in modulating immunity in the skin of mice.

10.1126/science.1225152

Transforming Fusions of *FGFR* and *TACC* Genes in Human Glioblastoma

D. Singh et al.

A fusion gene detected in a small subset of human brain tumors encodes a potentially druggable target.

10.1126/science.1220834

SCIENCE NOW

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Highlights From Our Daily News Coverage

Bats Catch Mating Flies in the Act

A study reveals that bats home in on noises made by copulating flies.

<http://scim.ag/Mating-Flies>

Selfish Sheep Seek the Center

GPS tracking provides evidence to back up biology's selfish herd theory.

<http://scim.ag/Selfish-Sheep>

Artificial Jellyfish Swims Like the Real Thing

Cell-silicone hybrid may inform the design of replacement hearts.

<http://scim.ag/Artificial-Jellyfish>

SCIENCE SIGNALING

www.sciencesignaling.org

The Signal Transduction Knowledge Environment
24 July issue: <http://scim.ag/ss072412>

RESEARCH ARTICLE: p53 Functions in Endothelial Cells to Prevent Radiation-Induced Myocardial Injury in Mice

C.-L. Lee et al.

PODCAST

D. G. Kirsch et al.

The transcription factor p53 protects the heart from radiation-induced damage.

RESEARCH ARTICLE: Distinct Spatial and Molecular Features of Notch Pathway Assembly in Regulatory T Cells

L. R. Perumalsamy et al.

PERSPECTIVE: Notch and the Survival of Regulatory T Cells—Location Is Everything!

L. M. Minter and B. A. Osborne

A cytosolic function of Notch helps regulatory T cells survive.

GLOSSARY

Find out what CTK, Rag, and Rheb mean in the world of cell signaling.

EVENTS

Plan to attend a signaling-relevant meeting, with more than 30 new meetings and conferences added in July.

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Integrating Medicine and Science

25 July issue: <http://scim.ag/stm072512>

FOCUS: In the Public Interest?

L. C. Sayres et al.

Restrictive patenting and licensing for cell-free fetal DNA testing has serious consequences for technology advances and benefits to public health.

RESEARCH ARTICLE: MHC-Resident Variation Affects Risks After Unrelated Donor Hematopoietic Cell Transplantation

E. W. Petersdorf et al.

The success of HLA-matched unrelated donor hematopoietic cell transplantation depends on non-HLA MHC region genetic variation.

RESEARCH ARTICLE: Temsirolimus Activates Autophagy and Ameliorates Cardiomyopathy Caused by Lamin A/C Gene Mutation

J. C. Choi et al.

Cardiomyopathy arising from lamin A/C mutations in mice can be corrected by enhancing autophagy through blockade of mTOR with temsirolimus.

RESEARCH ARTICLE: Rapamycin Reverses Elevated mTORC1 Signaling in Lamin A/C–Deficient Mice, Rescues Cardiac and Skeletal Muscle Function, and Extends Survival

F. J. Ramos et al.

Rapamycin treatment of a mouse model for a human laminopathy improves cardiac and muscle function, suggesting a therapy for human patients.

SCIENCE CAREERS

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Free Career Resources for Scientists

Experimental Error: Help Not Wanted

A. Ruben

The United States faces a severe shortage of qualified scientists—so why are there so many unemployed scientists?

http://scim.ag/EE_NotWanted

Q&A: A Career on the Fence

E. Pain

A graduate school dean and former Olympic athlete reflects on science, fencing, and how the two activities have benefited each other.

<http://scim.ag/OnTheFence>

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On the 27 July *Science* Podcast: self-assembly at the nanoscale, suicide-bombing termites, what's next for NASA's planetary program, and more.

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Science Policy News and Analysis

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