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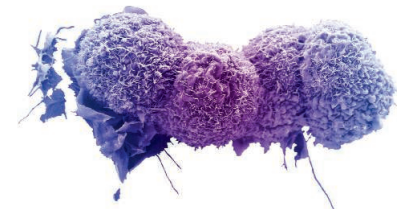
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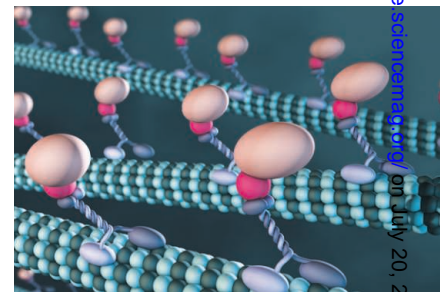
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COVER

First described by David Hilbert in 1891, the Hilbert curve is a one-dimensional fractal trajectory that densely fills higher-dimensional space without crossing itself. A new method for reconstructing the three-dimensional architecture of the human genome, described on page 289, reveals a polymer analog of Hilbert's curve at the megabase scale.

Image: Leonid A. Mirny and Erez Lieberman-Aiden

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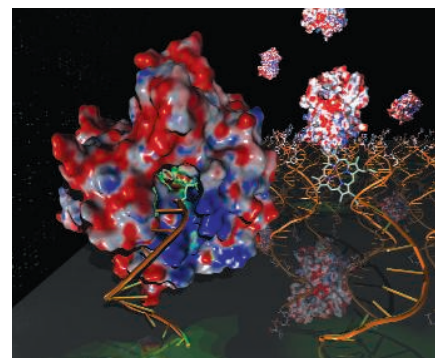
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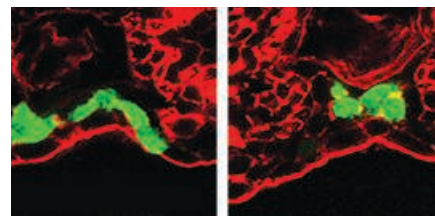
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SCIENCEONLINE

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Genotype Analysis Identifies the Cause of the "Royal Disease"

E. I. Rogaev et al.

DNA from historical specimens reveals the mutation causing the hemophilia that afflicted the royal families of Europe.
10.1126/science.1180660

Detection of an Infectious Retrovirus, XMRV, in Blood Cells of Patients with Chronic Fatigue Syndrome

V. C. Lombardi et al.

Two-thirds of a sample of 101 U.S. patients with chronic fatigue syndrome harbor an infectious retrovirus in their blood cells.
10.1126/science.1179052

A New Virus for Old Diseases?

J. M. Coffin and J. P. Stoye

10.1126/science.1181349

Coupling of CO₂ and Ice Sheet Stability Over Major Climate Transitions of the Last 20 Million Years

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Changes in global sea level and atmospheric carbon dioxide levels were similar during the past 20 million years.
10.1126/science.1178296

Microsecond Simulations of Spontaneous Methane Hydrate Nucleation and Growth

M. R. Walsh et al.

An extended simulation uncovers the intricate steps whereby methane can be trapped in ice.
10.1126/science.1174010

TECHNICALCOMMENTS

Comment on "The *Arabidopsis* Circadian Clock Incorporates a cADPR-Based Feedback Loop"

X. Xu et al.

full text at www.sciencemag.org/cgi/content/full/326/5950/230-b

Response to Comment on "The *Arabidopsis* Circadian Clock Incorporates a cADPR-Based Feedback Loop"

A. N. Dodd et al.

full text at www.sciencemag.org/cgi/content/full/326/5950/230-c

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RESEARCH ARTICLE: Wingless Promotes Proliferative Growth in a Gradient-Independent Manner

L. A. Baena-Lopez et al.

Proliferation of cells in the *Drosophila* wing does not require a gradient of the morphogen Wingless.

RESEARCH ARTICLE: Coordinated Responses to Oxygen and Sugar Deficiency Allow Rice Seedlings to Tolerate Flooding

K.-W. Lee et al.

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PERSPECTIVE: Apoptosis—Calling Time on Apoptosome Activity

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PERSPECTIVE: Snapshots Form a Big Picture of Guanine Nucleotide Exchange

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PODCAST

J.-P. Vincent and A. M. VanHook

Graded distribution of Wingless is not required for cell proliferation in the fly wing disc.

SCIENCE CAREERS

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SPECIAL RISK-TAKING ISSUE

Audacity, Part 2: A Blueprint for Audacious Science

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Breakthrough science needs passion, a supportive institution, and a suitable problem.

The Entrepreneurial Bug

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Making the Most of Opportunities and Challenges

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Neuroscientist Sam Pfaff went on to success after a falling out with his adviser.

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EDITORIAL: Space for the Cures

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Science launches a new journal for translational research.

COMMENTARY: Changing Models of Biomedical Research

W. F. Crowley Jr. and J. F. Gusella

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RESEARCH: Building Better Bones

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A biased agonist may promote bone growth more effectively.

PODCAST

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Science Policy News and Analysis

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