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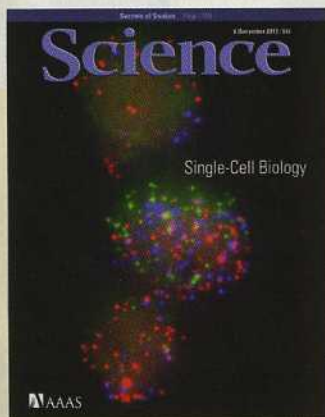
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>> **Science Podcast**
Listen to stories on noisy gene expression, results from drilling at the Tohoku-Oki fault, the benefits of snake venom, and more.
>> **Find More Online**
Check out Science Express, our podcast, videos, daily news, our research journals, and Science Careers at www.sciencemag.org.



COVER

Variation among three individual mouse embryonic fibroblasts in a micrograph in which individual messenger RNA transcripts from three genes fluoresce with different colored markers (cell diameter: ~12.5 micrometers). Such techniques that allow measurements in single cells provide new insights into biological control mechanisms and are the subject of a special section starting on page 1187.

Image: Dina Faddah and Rudolf Jaenisch, Whitehead Institute for Biomedical Research

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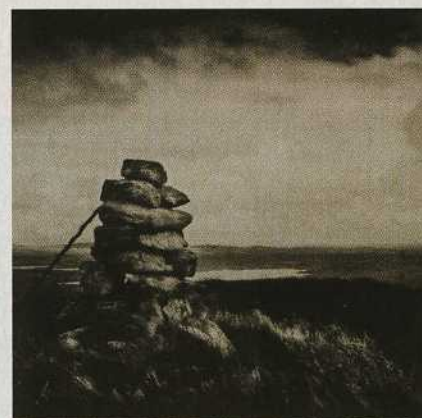
RESEARCH ARTICLES

- 1202 A Mechanism for Reorientation of Cortical Microtubule Arrays Driven by Microtubule Severing
J. J. Lindeboom et al.
A self-organizing system makes the microtubule array in plants rearrange in order for the shoot to turn toward blue light.
Research Article Summary; for full text:
<http://dx.doi.org/10.1126/science.1245533>
>> *Perspective p. 1180; Video*
- 1203 Oscillatory Control of Factors Determining Multipotency and Fate in Mouse Neural Progenitors
I. Imai et al.
During neural development, the differentiated state correlates with sustained expression of a single fate-determination factor.

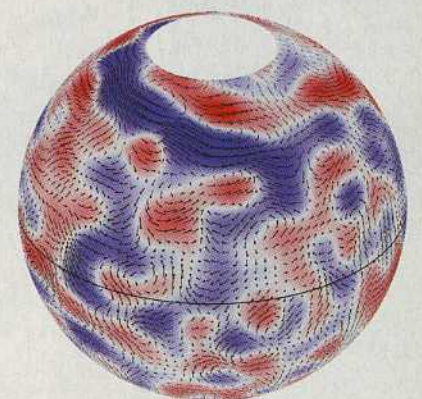
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- 1208 Structure and Composition of the Plate-Boundary Slip Zone for the 2011 Tohoku-Oki Earthquake
F. M. Chester et al.
The Tohoku-Oki earthquake occurred along a thin, clay-rich fault zone in the basal strata of the subducting plate.
- 1211 Low Coseismic Shear Stress on the Tohoku-Oki Megathrust Determined from Laboratory Experiments
K. Ujiie et al.
Rotary shear experiments reveal the frictional properties of clay-rich material recovered directly from the Tohoku-Oki fault zone.
- 1214 Low Coseismic Friction on the Tohoku-Oki Fault Determined from Temperature Measurements
P. M. Fulton et al.
A temperature anomaly of 0.31°C indicates that coseismic friction was extremely low during the Tohoku-Oki earthquake.
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- 1217 Giant Convection Cells Found on the Sun
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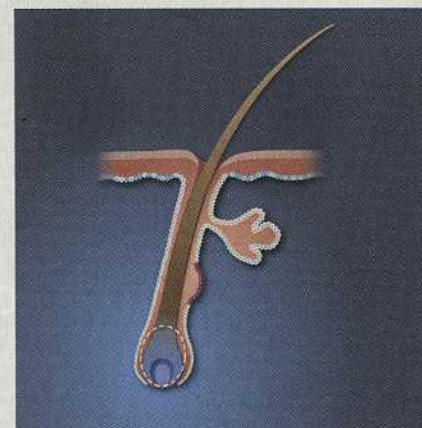
- 1226 Interfollicular Epidermal Stem Cells Self-Renew via Autocrine Wnt Signaling
X. Lim et al.
Stem cells produce short-range signals to support self-renewal and long-range signal inhibitors to allow differentiation.
>> *Perspective p. 1183*
- 1230 Preferential Recognition of Avian-Like Receptors in Human Influenza A H7N9 Viruses
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A. A. Kruglov et al.
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- 1247 Hedgehog Signaling Controls T Cell Killing at the Immunological Synapse
M. de la Roche et al.
T cell receptor stimulation activates Hedgehog signaling to arm cytotoxic T cells with the labile actin needed for killing.
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- 1251 Intact But Less Accessible Phonetic Representations in Adults with Dyslexia
B. Boets et al.
The persistent reading problems observed in dyslexia may derive from inefficient communication within the brain.
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- 1254 MicroRNA-128 Governs Neuronal Excitability and Motor Behavior in Mice
C. Lek Tan et al.
A microRNA expressed in adult neurons affects movement by modulating neuronal signaling networks and excitability.



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