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False-colored scanning electron micrograph of a zebrafish (*Danio rerio*) embryo (~0.7 millimeters across) at a late stage of development. Biophysical studies of model organisms such as zebrafish reveal forces that organize tissue patterns and shape cell layers and physical features (segments, cavities, and folds). The special section beginning on page 209 presents work in which physicists and biologists collaborate to explain the physical mechanisms of animal development.

Image: Dr. Richard Kessel/Visuals Unlimited, Inc.

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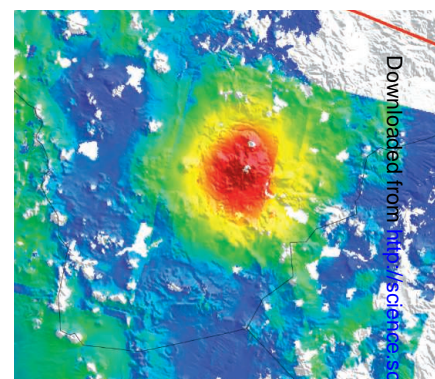
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- 270 Preference by Association: How Memory Mechanisms in the Hippocampus Bias Decisions
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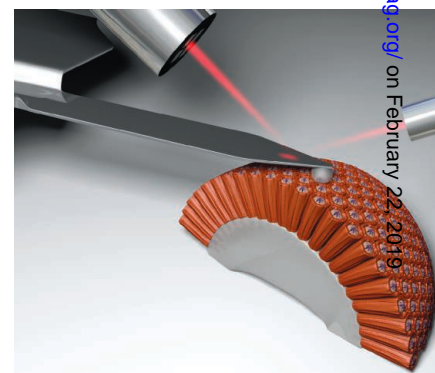
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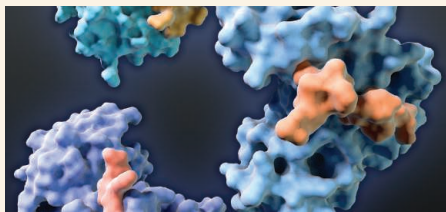


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D. E. Cook et al.
10.1126/science.1228746

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N. D. Derr et al.
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Comment and Response on “Climactic Niche Shifts Are Rare Among Terrestrial Plant Invaders”
Comment: B. L. Webber et al.
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RESEARCH ARTICLE: Interferon-Induced SCYL2 Limits Release of HIV-1 by Triggering PP2A-Mediated Dephosphorylation of the Viral Protein Vpu
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RESEARCH ARTICLE: Specificity of Linear Motifs That Bind to a Common Mitogen-Activated Protein Kinase Docking Groove
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Three related kinases use structural features to discriminate between potential binding partners.

PRESENTATION: Posttraumatic Stress Disorder in Children and Adolescents—Neuroendocrine Perspectives
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Trauma-induced changes in circulating cortisol concentrations are associated with pediatric PTSD.

PRESENTATION: Fetal Programming of Brain Development—Intrauterine Stress and Susceptibility to Psychopathology
C. Buss et al.
Intrauterine stress and maternal obesity are associated with neurodevelopmental disorders.

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The neurotrophic factor BDNF has opposite effects on cocaine- and morphine-induced neuroplasticity.

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Perspective: Embrace Flexible Work Arrangements
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RESEARCH ARTICLE: Human Neural Stem Cells Induce Functional Myelination in Mice with Severe Dysmyelination
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Human neural stem cell transplants restore myelination in mice with a hypomyelination disorder.

RESEARCH ARTICLE: Neural Stem Cell Engraftment and Myelination in the Human Brain
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RESEARCH ARTICLE: Immunotherapy Against HPV16/18 Generates Potent T_H1 and Cytotoxic Cellular Immune Responses
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CD8⁺ T cells with cytolytic activity are induced after therapeutic HPV vaccination in humans.

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PERSPECTIVE: Next-Generation Treatments for Mental Disorders
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New approaches are needed for developing next-generation treatments for mental disorders.

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