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BREVIA: Serotonin Modulates Behavioral Reactions to Unfairness
M. J. Crockett, L. Clark, G. Tabibnia, M. D. Lieberman, T. W. Robbins
Individuals with low levels of brain serotonin are less likely to accept an unfair offer of money from other players in a laboratory game.

ECOLOGY
Animal Versus Wind Dispersal and the Robustness of Tree Species to Deforestation
D. Montoya, M. A. Zavala, M. A. Rodriguez, D. W. Purves
In Spanish forests, tree species with seeds that are dispersed by animals are more resilient in a fragmented forest than those with wind-dispersed seeds.

CHEMISTRY
The Role of Interstitial Sites in the Ti3d Defect State in the Band Gap of Titania
S. Wendt et al.
Scanning tunneling microscope data and calculations show that near-surface titanium sites, not bridging oxygen vacancies, determine the useful electronic properties of TiO2.

EVOLUTION
Natural Selection Shapes Genome-Wide Patterns of Copy-Number Polymorphism in Drosophila melanogaster
J. J. Emerson, M. Cardoso-Moreira, J. O. Borevitz, M. Long
A high-resolution analysis of gene copy number in Drosophila species shows that most variations are deleterious but a few for resistance to toxins are being positively selected.

TECHNICAL COMMENT ABSTRACTS
GEOPHYSICS
Comment on “Intermittent Plate Tectonics?”
J. Korenaga
Response to Comment on “Intermittent Plate Tectonics?”
P. G. Silver and M. D. Behn

PHYSICS
Fine Structure Constant Defines Visual Transparency of Graphene
R. R. Nair et al.
The transparency of sheets of graphene is quantized in a way that allows a simple determination of the fine structure constant, which relates light and relativistic electrons.

RESEARCH ARTICLES
ASTRONOMY
An Eccentric Binary Millisecond Pulsar in the Galactic Plane
D. J. Champion et al.
A rapidly rotating pulsar has a highly eccentric orbit about its companion star, not the usual circular orbit, challenging ideas on how such binary systems form.

MICROBIOLOGY
Predictive Behavior Within Microbial Genetic Networks
I. Tagkopoulos et al.
Predictable sequences of environmental signals can be exploited by bacteria so that they learn to anticipate future metabolic needs and thereby gain a competitive edge.

REPORTS
ASTRONOMY
A Transient Radio Jet in an Erupting Dwarf Nova
E. Körding et al.
Detection of a radio jet in a dwarf supernova shows that production of synchrotron radiation during accretion of a disk is a ubiquitous source of astrophysical jets.
MOLECULAR BIOLOGY

The Transcriptional Landscape of the Yeast Genome Defined by RNA Sequencing
U. Nagalakshmi et al.
A more complete catalog of transcribed DNA of yeast is assembled by shotgun sequencing of messenger RNA and reveals numerous previously unknown transcribed regions.

DEVELOPMENTAL BIOLOGY

The Transcription/Migration Interface in Heart Precursors of Ciona intestinalis L. Christiaen et al.
In embryonic cells destined to form the heart in a simple chordate, a genetic network activates modules of effector genes for proteins that control cellular migration.

NEUROSCIENCE

High Impulsivity Predicts the Switch to Compulsive Cocaine-Taking D. Belin et al.
Rats that are more impulsive, but not those that seek novelty, tend to compulsively consume cocaine and become addicted.

>> Science Podcast

NEUROSCIENCE

The six regions of the macaque cortex that respond to faces are strongly and specifically interconnected, indicating hierarchical processing of face stimuli.
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Defect in NQO1 gene dramatically reduces survival rates, responsiveness to treatment.

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PERSPECTIVE: ROCO Kinase Activity Is Controlled by Internal GTPase Function
B. Weiss
The guanosine triphosphatase (GTPase) domain of leucine-rich repeat kinase 2 (LRRK2) mediates LRRK2 homodimerization and controls its protein kinase activity.

PERSPECTIVE: Dual Functions of the KNOTTED1 Homeodomain—Sequence-Specific DNA Binding and Regulation of Cell-to-Cell Transport
N. Bolduc, S. Hake, D. Jackson
A single domain confers different subcellular localizations of the homeodomain protein KN1.

TEACHING RESOURCE: Physiological and Pathological Actions of Calpains in Glutamatergic Neurons
J. Liu, M. C. Liu, K. K. W. Wang
A pair of animations illustrates how neuronal calpains contribute to synaptic plasticity or neuronal toxicity.

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Student-Veterans Come Marching Home:
Their Return to Studies
A. Kotok
A group of Iraq and Afghanistan veterans tells about their new lives as science and engineering students.

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A. Kotok
Can the proposed G.I. Bill do for Iraq and Afghanistan veterans what the original G.I. Bill did for World War II veterans?

Taken for Granted: Over Here
B. L. Benderly
Science and technology fields offer professional opportunities for veterans who choose wisely.

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GrantsNet Staff
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