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**REVIEW**

1047 The Continuing Challenge of Understanding, Preventing, and Treating Neural Tube Defects  
J. B. Wallingford et al.  
Review Summary; for full text:  
http://dx.doi.org/10.1126/science.1222002

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**COVER**

The rock pigeon (*Columba livia*) exhibits spectacular variation among more than 350 different domestic breeds. The adult male Old Dutch capuchine shown here is one of many breeds with a crest of reversed feathers on its head and neck. See page 1063 for a description of the genetic origins of the head crest and the relationships among breeds. For the story behind the cover, go to http://scim.ag/cov6123.

*Photo: Sydney Stringham*
REPORTS

1048 A Black Hole Nova Obscured by an Inner Disk Torus
J. M. Corral-Santana et al.
Optical observations of a variable binary x-ray source reveal a black hole 3.6 times the Sun’s mass in a short-period orbit.

1051 Quantitative Magneto-Mechanical Detection and Control of the Barkhausen Effect
J. A. J. Burgess et al.
A magnetic vortex core is used to probe nanoscale changes in magnetization.

1054 Coherence and Indistinguishability of Single Electrons Emitted by Independent Sources
E. Bocquillon et al.
The interference of single electrons emitted from independent sources is demonstrated.

1057 InP Nanowire Array Solar Cells Achieving 13.8% Efficiency by Exceeding the Ray Optics Limit
J. Wallentin et al.
Nanowire solar cells were fabricated that exhibit high photocurrents and low surface recombination.

1060 Synchronous Change of Atmospheric CO₂ and Antarctic Temperature During the Last Deglacial Warming
F. Parrenin et al.
Rising air temperature did not lead the increase of atmospheric carbon dioxide concentration during the last deglaciation.

1063 Genomic Diversity and Evolution of the Head Crest in the Rock Pigeon
M. D. Shapiro et al.
From Piazza San Marco to Trafalgar Square, pigeons have captured the attention of tourists from around the world.

1067 KNOX2 Genes Regulate the Haploid-to-Diploid Morphological Transition in Land Plants
K. Sakakibara et al.
A transcription factor enables land plants to alternate between haploid and diploid status in successive generations.

1071 Mspl and Ipl1/Aurora B Act Sequentially to Correctly Orient Chromosomes on the Meiotic Spindle of Budding Yeast
R. E. Meyer et al.
Two kinases mediate a partner-changing interlude that prevents chromosome segregation errors in yeast meiosis.

1074 Genome-Wide Quantitative Enhancer Activity Maps Identified by STARR-seq
C. D. Arnold et al.
A map of thousands of Drosophila cell type-specific enhancers is revealed using a new method.

1077 Genomic Analysis of Non-NF2 Meningiomas Reveals Mutations in TRAF7, KLF4, AKT1, and SMO
V. E. Clark et al.
The mutational profiles of meningiomas, a common type of brain tumor, correlate with their anatomical location and clinical status.

1080 Unraveling the Mechanism of Protein Disaggregation Through a ClpB-DnaK Interaction
R. Rosenzweig et al.
Bacterial protein disaggregation elucidated via a combined biochemical methyl–transverse relaxation–optimized spectroscopy nuclear magnetic resonance approach.

1084 Sex Differences in the Gut Microbiome Drive Hormone-Dependent Regulation of Autoimmunity
J. G. M. Markle et al.
In mice, the gut microbiota influences levels of sex hormones and the development of autoimmune disease.

1088 Interferon-ε Protects the Female Reproductive Tract from Viral and Bacterial Infection
K. Y. Fung et al.
The cytokine interferon-ε is expressed in the female reproductive tract and protects against sexually transmitted diseases.

1092 Spreading Depression Triggers Headache by Activating Neuronal Panx1 Channels
H. Karatas et al.
Migraine results from a sequence of events starting from stressed cortical neurons and leading to the trigeminal nucleus.

1095 Stress in Puberty Unmasks Latent Neuropathological Consequences of Prenatal Immune Activation in Mice
S. Giovanoli et al.
Unfortunate synergies between stressors at vulnerable stages may underlie psychopathologies in mice.