EDITORIAL

Genomics Is Not Enough.
*Aravinda Chakravarti.*

NEWS OF THE WEEK

A roundup of the week’s top stories.

NEWS & ANALYSIS

**Human Cells Cloned — Almost.**
Where Do Human Eggs Come From?

Sifting Medical Records to Determine Which Therapies Work Best.

Gene Therapists Celebrate a Decade of Progress.

Curious Cosmic Speed-Up Nabs Nobel Prize.

Immunology Prize Overshadowed by Untimely Death of Awardee.

NEWS FOCUS

**An Epoch Debate.**
*>> Science Podcast.*

LETTERS

Strategic Success for Hydropower in Laos.
*G. Guerrier et al.*

Justifiable Changes to *Indicators* Survey.
*C. Touney and T. Guterbock.*

NexGenVOICES: Future of a Generation Exxon-Mobil Funding Overstated.
*J. L. Bast et al.*
CORRECTIONS AND CLARIFICATIONS

BOOKS ET AL.

Out of This World.
M. Ashley.

POLICY FORUM

Paleolithic Art in Peril: Policy and Science Collide at Altamira Cave.
C. Saiz-Jimenez et al.

PERSPECTIVES

The Guts of Dietary Habits.
U. Gophna.
>> Report p. 105

Resilience to Blooms.
J. D. Brookes and C. C. Carey.

Neuroimmune Communication.
E. F. Trakhtenberg and J. L. Goldberg.
>> Reports pp. 98 and 101

The Genomic Basis of Local Climatic Adaptation.
O. Savolainen.
>> Report pp. 83 and 86

Toward Control of Large-Scale Quantum Computing.
D. P. DiCincenzo.
>> Report p. 57

Diamond Window into the Lower Mantle.
B. Harte.
>> Research Article p. 54

RESEARCH ARTICLES

M. J. Walter et al.
Tiny minerals trapped inside Brazilian diamonds show that Earth’s carbon cycle extends down to the lower mantle.
>> Perspective p. 51

REPORTS

Universal Digital Quantum Simulation with Trapped Ions.
B. P. Lanyon et al.
A series of trapped calcium ions was used to simulate the complex dynamics of an interacting spin system.

Implementing the Quantum von Neumann Architecture with Superconducting Circuits.
M. Mariantoni et al.
A quantum version of a central processing unit was created with superconducting circuits and elements.

Three-Dimensional Anderson Localization of Ultracold Matter.
S. S. Kondov et al.
A localized and a propagating component appear when an ultracold atomic gas expands in a disordered optical potential.

Detection of Pulsed Gamma Rays Above 100 GeV from the Crab Pulsar.
The VERITAS Collaboration.
This detection constrains the mechanism and emission region of gamma-ray radiation in the pulsar’s magnetosphere.

Dispersible Exfoliated Zeolite Nanosheets and Their Application as a Selective Membrane.
K. Varoon et al.
Thin zeolite films prepared through a polymer exfoliation method were used as selective membranes.

A Major Constituent of Brown Algae for Use in High-Capacity Li-Ion Batteries.
I. Kovalenko et al.
Alginate extracts help stabilize silicon nanoparticles used in a high-capacity lithium-silicon battery.

A Self-Quenched Defect Glass in a Colloid-Nematic Liquid Crystal Composite.
T. A. Wood et al.
A high concentration of colloidal particles stabilizes a defect network in a liquid crystal and creates a gel-like material.

Adaptation to Climate Across the Arabidopsis Thaliana Genome.
A. M. Hancock et al.
Alleles that are under selection in Arabidopsis serve as genetic markers that can be used to predict local adaptation.

A map of Local Adaptation in Arabidopsis thaliana.
A. Fournier et al.
Field experiments identify loci associated with fitness and local adaptation in Arabidopsis.

The Shaping of Modern Human Immune Systems by Multiregional Admixture with Archaic Humans.
Viral defense and embryo implantation mechanisms have been shaped by contributions from Neandertal and Denisovan genes.

An Aboriginal Australian Genome Reveals Separate Human Dispersals into Asia.

Whole-genome data indicate that early modern humans expanded into Australia 62,000 to 75,000 years ago.

Acetylcholine-Synthesizing T Cells Relay Neural Signals in a Vagus Nerve Circuit.

A neural circuit that involves a specialized population of memory T cells regulates the immune response.

Functional Innervation of Hepatic iNKT Cells Is Immunosuppressive Following Stroke.

Neurotransmitters relay immunosuppressive signals to natural killer T cells after Stroke.

Linking Long-Term Dietary Patterns with Gut Microbial Enterotypes.

The basic composition of the human gut microbiome is influenced by long-term diet: high fat and protein versus high fiber.

Scanning electron microscope image of strand of hair (about 80 micrometers wide) from the Aboriginal Australian whose genome was sequenced. The genomic sequence provides evidence for multiple dispersals into Asia of modern humans. See Page 94.

Courtesy of Timothy P. Topper, Natural History Museum of Denmark.