The right forearm and hand (hand skeleton ~12.3 centimeters long) of Australopithecus sediba, specimen Malapa Hominin 2. Papers in this issue present a detailed look at the hands, feet, pelvis, brain endocast, and age of this hominid, which lived 2 million years ago, near the emergence of our genus, Homo.

See the series of Reports starting on p. 1402, News Focus package p. 1370, and www.sciencemag.org/extra/sediba.

Photo: Peter Schmid, courtesy of Lee Berger and the University of the Witwatersrand
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1401 A Gene for an Extended Phenotype
K. Hoover et al.
An insect virus gene controls the behavior of the dying host to increase dispersion of the virus.

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1402 The Endocast of MH1, Australopithecus sediba
K. J. Carlson et al.

1407 A Partial Pelvis of Australopithecus sediba
J. M. Kibii et al.

1411 Australopithecus sediba Hand Demonstrates Mosaic Evolution of Locomotor and Manipulative Abilities
T. L. Kivell et al.

1417 The Foot and Ankle of Australopithecus sediba
B. Zipfel et al.

1421 Australopithecus sediba at 1.977 Ma and Implications for the Origins of the Genus Homo
R. Pickering et al.
Details of the hands, feet, pelvis, and brain of Australopithecus sediba show both primitive features and one derived toward those of Homo.

1423 A Simple, Multidimensional Approach to High-Throughput Discovery of Catalytic Reactions
D. W. Robbins and J. F. Hartwig
A screening technique based on simple mass spectrometry measurements uncovers catalysts for organic coupling reactions.

1427 Ice Flow of the Antarctic Ice Sheet
E. Rignot et al.
A high-resolution map of ice motion in Antarctica shows the details of ice movement in a warming climate.

1430 Aerodynamic Flutter Produces Hummingbird Feather Songs
C. J. Clark et al.
Hummingbirds produce diverse courtship sounds by using resonantly fluttering tail feathers.

1434 Flight at Low Ambient Humidity Increases Protein Catabolism in Migratory Birds
A. R. Gerson and C. G. Guglielmo
Dry conditions during endurance flight increase rates of lean mass loss and protein catabolism in Swainson’s thrushes.

1436 Generation of Spatial Patterns Through Cell Polarity Switching
S. Robinson et al.
A few simple rules are sufficient to keep neighboring stomata at a safe distance from one another.

1440 X-Ros Signaling: Rapid Mecha-Chemo Transduction in Heart
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B. S. Strunk et al.
Ribosome assembly factors block multiple steps in translation initiation.

1453 Mutations in CIC and FUBP1 Contribute to Human Oligodendroglioma
C. Bettegowda et al.
A gene originally studied for its role in fruit fly embryogenesis is implicated in the growth of a common human brain tumor.

1456 Synaptic Pruning by Microglia Is Necessary for Normal Brain Development
R. C. Paolicelli et al.
A good brain needs a good vacuum cleaner.

1458 Light-Induced Structural and Functional Plasticity in Drosophila Larval Visual System
Q. Yuan et al.
Postsynaptic plasticity participates in the adaptation of a sensory circuit to the environment.

1462 HCN2 Ion Channels Play a Central Role in Inflammatory and Neuropathic Pain
E. C. Emery et al.
Action potential firing, initiated by HCN2 ion channels, is the basic mechanism underlying neuropathic pain.

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J. E. Epstein et al.
Intravenous immunization of purified and irradiated malaria parasite in mice conferred protection against malaria.
10.1126/science.1211548

An Expanded Palette of Genetically Encoded Ca2+ Indicators
Y. Zhao et al.
Directed protein evolution provides a series of fluorescent protein–based indicators for multicolor Ca2+ imaging.
10.1126/science.1208592

Synthesized Light Transients
A. Wirth et al.
Light spanning the near infrared to the ultraviolet has been confined in pulses shorter than a single optical cycle.
10.1126/science.1210268

800,000 Years of Abrupt Climate Variability
S. Barker et al.
Greenland climate variability for the past 800,000 years was inferred from the Antarctic ice-core temperature record.
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I. Kovalenko et al.
Alginic extracts help stabilize silicon nanoparticles used in a high-capacity lithium-silicon battery.
10.1126/science.1209150

FOCUS: Getting to the Root of Hydrocephalus
J. P. McAllister
The blood-borne lipid lysosphosphatidic acid and its receptor contribute to fetal-onset hydrocephalus, a severe neurological disorder of newborns.

RESEARCH ARTICLE: Lysoosphosphatidic Acid Signaling May Initiate Fetal Hydrocephalus
Y. C. Yang et al.
Blockade of lysosphosphatidic acid (LPA) signaling provides a new strategy for treating fetal hydrocephalus.

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J. Chun and D. Smith
A conversation with Jerold Chun about identification of a lipid in blood that may trigger hydrocephalus in the fetus.

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