SPECIAL SECTION

Ardipithecus ramidus

INTRODUCTION

60 Light on the Origin of Man

RESEARCH ARTICLES

Ardipithecus ramidus and the Paleobiology of Early Hominids
Tim D. White et al.
Authors’ Summary p. 64, Full Text p. 75

The Geological, Isotopic, Botanical, Invertebrate, and Lower Vertebrate Surroundings of Ardipithecus ramidus
Giday WoldeGabriel et al.
Authors’ Summary p. 65, Full Text Online

Taphonomic, Avian, and Small-Vertebrate Indicators of Ardipithecus ramidus Habitat
Antoine Louchart et al.
Authors’ Summary p. 66, Full Text Online

Macrovertebrate Paleontology and the Pliocene Habitat of Ardipithecus ramidus
Tim D. White et al.
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The Ardipithecus ramidus Skull and Its Implications for Hominid Origins
Gen Suwa et al.
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Paleobiological Implications of the Ardipithecus ramidus Dentition
Gen Suwa et al.
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Careful Climbing in the Miocene: The Forelimbs of Ardipithecus ramidus and Humans Are Primitive
C. Owen Lovejoy et al.
Authors’ Summary p. 70, Full Text Online

The Pelvis and Femur of Ardipithecus ramidus: The Emergence of Upright Walking
C. Owen Lovejoy et al.
Authors’ Summary p. 71, Full Text Online

Combining Prehension and Propulsion: The Foot of Ardipithecus ramidus
C. Owen Lovejoy et al.
Authors’ Summary p. 72, Full Text Online

The Great Divides: Ardipithecus ramidus Reveals the Postcranial of Our Last Common Ancestors with African Apes
C. Owen Lovejoy et al.
Authors’ Summary p. 73, Full Text p. 100

Reexamining Human Origins in Light of Ardipithecus ramidus
C. Owen Lovejoy
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EDITORIAL

17 Understanding Human Origins
Bruce Alberts
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NEWS OF THE WEEK

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CORRECTIONS AND CLARIFICATIONS

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Cover

Partial skeleton of Ardipithecus ramidus, a hominin species living about 4.4 million years ago in Ethiopia. This female stood about 1.2 meters high. Eleven papers from an international team of authors published in print and online in this special issue describe the anatomy of this species and its habitat and discuss the implications for understanding human evolution. One result is that extant great apes are poor models for our last common ancestor with chimpanzees. See page 60 for an introduction.

Image: © T. White, 2008
Regulatory T Cells Control T Cell Responses in a Stat3-Dependent Manner
A. Chaudhry et al.
Suppressor T cells regulate different classes of immune responses through induction of specific transcription factors.
10.1126/science.1177027

Two Chemoreceptors Mediate Developmental Effects of Dauer Pheromone in C. elegans
K. Kim et al.
Chemical signals that determine alternative nematode developmental programs act via two G protein–coupled receptors.
10.1126/science.1176331

Probing the Magnetic Field of Light at Optical Frequencies
M. Burrusi et al.
A split-ring resonator coupled to a scanning probe is used to measure the weak magnetic component of light.
10.1126/science.1177096

A Population of Compact Elliptical Galaxies Detected with the Virtual Observatory
I. Chilingarian et al.
A sample of elliptical systems provides evidence that disruption of galaxies plays an important role in their evolution.
10.1126/science.1175930

The Upside of Recessions
B. L. Benderly
Economic downturns are linked to better health.

Flying High
S. Gaidos
Cecilia Aragon lacked the confidence to be a scientist—and then she learned to fly.

Destigmatizing Depression
K. Hede
Physician-scientist trainees are often reluctant to admit to suffering from depression.

Taken for Granted: Is a New Model Needed for Breakthrough Science?
B. L. Benderly
Traditional PI-centered research cannot solve the big problems, a lab leader asserts.

Host Signaling Through Cleavage-Activated Protein Tyrosine Phosphatases
M. A. Gomez et al.
The parasite protein GP63 triggers cleavage and activation of host protein tyrosine phosphatases to promote infection.
RESEARCH ARTICLE: Hippo Pathway–Dependent and –Independent Roles of RASSF6
M. Ikeda et al.
RASSF6 is both an inhibitor and a promoter of apoptosis, and its proapoptotic activity is regulated by the mammalian kinase MST2, a Hippo homolog.

PERIODICAL: Sending ROS on a Bullet Train
H. L. Wong and K. Shimamoto
Hydrogen peroxide is an auto-propagating, rapid systemic stress signal generated by RBOHD in Arabidopsis.

PERIODICAL: STAT3 Revs Up the Powerhouse
N. C. Reich
The transcription factor STAT3 stimulates mitochondria to augment Ras-dependent oncogenic transformation.

REVIEW: Transduction of Redox Signaling by Electrophile–Protein Reactions
T. K. Rudolph and B. A. Freeman
Attachment of electrophilic products of redox reactions to proteins links cell function to changes in metabolic and inflammatory status.

Owning up to depression.

SPECIAL FEATURE: Arapidiphus ramidus
The entire contents of this week’s special section, online—plus special video and podcast features. Find it all at www.sciencemag.org/arapidiphus/.

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