CONTENTS

5 MAY 2017 • VOLUME 356 • ISSUE 6337

NEWS

IN BRIEF
468 News at a glance

IN DEPTH
470 CONGRESS TRUMPS PRESIDENT IN BACKING SCIENCE
Legislators ignore Trump’s call for cuts and give NIH, NASA research big increases By J. Mervis and the Science News Staff

471 DOE FREEZES MILLIONS IN AWARDS
Scientists furious over ARPA-E funding hiatus, gag order By J. Mervis

472 MAURITIUS INVITES PRIMATE RESEARCH LABS TO SET UP SHOP
Animal welfare activists protest move by nation that exports research macaques By M. Wadman

473 NEW CROP PEST TAKES AFRICA AT LIGHTNING SPEED
The fall armyworm has invaded more than 20 sub-Saharan countries By E. Stokstad

475 NASA PUSHERS FOR DIVERSITY IN PLANETARY SCIENCE
New Frontiers mission announcement includes call for more inclusive teams By P. Voosen

FEATURE
476 FAST AND CURIOUS
A global robotic telescope network helps astronomers keep up with the fast-changing sky By D. Clery

INSIGHTS

BOOKS ET AL.
480 GOING GREEN ON THE SILVER SCREEN

PERSPECTIVES
485 BEYOND HAMILTON’S RULE
A broader view of how relatedness affects the evolution of altruism is emerging By H. P. de Vladar and E. Szathmáry

487 SURPRISING STATES OF ORDER FOR LINEAR DIBLOCK COPOLYMERS
Thermal treatments unlock low-symmetry phases resembling those of metals and alloys By G. E. Stein
▶ REPORT P. 520

488 INFLAMMATION BY WAY OF MACROPHAGE METABOLISM
IL-10 controls macrophage inflammatory function by reprogramming metabolism By A. M. Kabat and E. J. Pearce
▶ RESEARCH ARTICLE P. 513

489 TRANSCRIPTION FACTORS READ EPIGENETICS
Many homeodomain transcription factors can bind methylated DNA By T. R. Hughes and S. A. Lambert
▶ RESEARCH ARTICLES PP. 502 & 503

491 THOMAS EARL STARZL (1926–2017)
Father of modern transplantation By J. J. Fung

492 UNMASK TEMPORAL TRADE-OFFS IN CLIMATE POLICY DEBATES
Both 20- and 100-year time scales should always be reported By I. B. Ocko et al.
▶ POLICY FORUM P. 493

493 A CLIMATE POLICY PATHWAY FOR NEAR- AND LONG-TERM BENEFITS
Climate actions can advance sustainable development By D. Shindell et al.
▶ POLICY FORUM P. 492

LETTERS
495 MELTING GLACIERS: HIDDEN HAZARDS
By Q. Zhang et al.

495 RESETTING THE BAR FOR GRADUATE ADMISSIONS
By W. Y. Vélez

496 LIFE IN SCIENCE: THE ROADLESS DUNES LESS TRAVELED
By P. L. Ibisch

496 TECHNICAL COMMENT ABSTRACTS
RESEARCH

IN BRIEF

497 From Science and other journals

REVIEW

500 MATERIALS SCIENCE
Advances in engineering hydrogels
Y. S. Zhang and A. Khademhosseini
REVIEW SUMMARY: FOR FULL TEXT: dx.doi.org/10.1126/science.aaf3627

RESEARCH ARTICLES

501 NEURODEVELOPMENT
Self-organized Notch dynamics generate stereotyped sensory organ patterns in Drosophila F. Corson et al.
RESEARCH ARTICLE SUMMARY: FOR FULL TEXT: dx.doi.org/10.1126/science.aaj7407

502 DNA METHYLATION
Impact of cytosine methylation on DNA binding specificities of human transcription factors Y. Yin et al. RESEARCH ARTICLE SUMMARY; FOR FULL TEXT: dx.doi.org/10.1126/science.aaj2239

503 DNA METHYLATION
Integration of CpG-free DNA induces de novo methylation of CpG islands in pluripotent stem cells Y. Takahashi et al.
> PERSPECTIVE P. 489

508 COMPUTER SCIENCE
DeepStack: Expert-level artificial intelligence in heads-up no-limit poker M. Moravčík et al.

513 INFLAMMATION
Anti-inflammatory effect of IL-10 mediated by metabolic reprogramming of macrophages W. K. E. Ip et al.
> PERSPECTIVE P. 488

REPORTS

520 POLYMER SCIENCE
Thermal processing of diblock copolymer melts mimics metallurgy K. Kim et al.
> PERSPECTIVE P. 487

523 METHANE CHEMISTRY
Selective anaerobic oxidation of methane enables direct synthesis of methanol V. L. Sukhnevich et al.

527 OCEAN ACIDIFICATION
The complex effects of ocean acidification on the prominent N2-fixing cyanobacterium Trichodesmium H. Hong et al.

531 NOISE POLLUTION
Noise pollution is pervasive in U.S. protected areas R. T. Buxton et al.

534 NEUROSCIENCE
Branch-specific plasticity of a bifunctional dopamine circuit encodes protein hunger Q. Liu et al.

539 EVOLUTIONARY GENETICS
Negative selection in humans and fruit flies involves synergistic epistasis M. Sohail et al.

543 HUMAN GENETICS
Dispersals and genetic adaptation of Bantu-speaking populations in Africa and North America E. Putin et al.

547 WORKING LIFE
Completing a career By G. Andrew Mickley

554 WORKING LIFE
Moving forward after the march By Rush D. Holt

ON THE COVER

A playing card—as used in the game of poker—with an artistic rendition of a digital circuit board. Games in which players have asymmetric information during play, such as poker, have proven challenging for artificial intelligence. The computer program DeepStack takes a new approach, bringing local search techniques to such games. DeepStack defeated professional players at heads-up no-limit Texas hold’em poker. See page 508.

Image: Graham Johnson

SCIENCE (ISSN 0036-8075) is published weekly on Friday, except the last week in December, by the American Association for the Advancement of Science, 1200 New York Avenue, NW, Washington, DC 20005. Periodicals postage (publication No. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 2017 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): $165 ($74 allocated to subscription). Domestic institutional subscription (51 issues): $1659; Foreign postage extra: Mexico, Caribbean (surface mail) $55; other countries (air assist postage (publication No. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 2017 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): $165 ($74 allocated to subscription). Domestic institutional subscription (51 issues): $1659; Foreign postage extra: Mexico, Caribbean (surface mail) $55; other countries (air assist

Published by AAAS

5 MAY 2017 • VOL 356 • ISSUE 6337
Science 356 (6337), 467-554.

http://science.sciencemag.org/content/356/6337

http://www.sciencemag.org/help/reprints-and-permissions