SPECIAL SECTION
Global health

INTRODUCTION
1256 Global health: What works

NEWS
1258 After the windfall By M. Enserink
1260 A hard look at global health measures By J. Cohen
1266 As cholera goes, so goes Haiti By S. Kean
1268 China tries to kick its salt habit By M. Hvistendahl
1270 Zambia fights to sustain its malaria success By K. Kupferschmidt

OPINION
1272 Halving premature death By R. Peto et al.

PERSPECTIVES
1273 Putting women and girls at the center of development M. F. Gates
1275 The state of global health in 2014 J. Sepúlveda and C. Murray
1279 Getting essential health products to their end users: Subsidize, but how much? P. Dupas
1281 Models of education in medicine, public health, and engineering P. Garcia et al.
1284 Prioritizing integrated mHealth strategies for universal health coverage G. Mehl and A. Labrique
1287 How to transform the practice of engineering to meet global health needs D. Niemeier et al.
1290 Strengthening the evidence base for health programming in humanitarian crises A. Ager et al.
1292 Emerging, evolving, and established infectious diseases and interventions M. E. Halloran and I. M. Longini Jr.
1295 Virus sharing, genetic sequencing, and global health security L. O. Gostin et al.

1297 Monitoring parasite diversity for malaria elimination in sub-Saharan Africa A. Ghansah et al.
1299 Antibiotic effectiveness: Balancing conservation against innovation R. Laxminarayan
1302 Creating a global observatory for health R&D R. F. Terry et al.

ON THE COVER
A woman cares for her 5-year-old grandson, who has malaria, in a hospital in northwestern Zambia. An upsurge in funding for global health over the past 15 years has brought dramatic declines in deaths and illness from malaria and other diseases of the poor. Countries like Zambia are now trying to preserve those gains while tackling new challenges. See page 1256.

Photo: © John Stanmeyer/VII/Corbis
CONTENTS

NEWS

IN BRIEF
1224 Roundup of the week's news

IN DEPTH
1228 EBOLA VACCINES RACING FORWARD AT RECORD PACE
Rushing them into widespread use without large-scale trials raises hopes and concerns By J. Cohen
⇒ EDITORIAL P. 1221;
GLOBAL HEALTH SECTION P. 1256

1229 EBOLA: “WOW, THAT IS REALLY TOUGH”
WHO’s Bruce Aylward says international action is needed right now By L. Roberts
⇒ EDITORIAL P. 1221;
GLOBAL HEALTH SECTION P. 1256

1231 SECESSION VOTE ROCKS SCIENCE
Vying camps make bold claims about Scottish sovereignty as a blessing—or a curse—for science By D. Clery

1232 GIANT DINOSAUR WAS A TERROR OF CRETACEOUS WATERWAYS
Fossils offer first evidence that some dinosaurs could swim By M. Balter
⇒ IBRAHIM ET AL. 10.1126/SCIENCE.1258750

1233 CHINA BLAMED FOR U.S. OZONE
Western states caught between rising background levels and more stringent federal limits By E. Hand

FEATURE
1234 YOUNG BLOOD
Young animals’ blood holds rejuvenating powers. Amy Wagers wants to know why
By S. S. Hall

INSIGHTS

PERSPECTIVES
1240 RNA AND DYNAMIC NUCLEAR ORGANIZATION
Long noncoding RNAs may function as organizing factors that shape the cell nucleus By J. Rinn and M. Guttman
⇒ REPORT P. 1340

1242 MORALITY BEYOND THE LAB
Much of moral life involves attending to our own good deeds and to the bad deeds of others By J. Graham
⇒ REPORT P. 1340

1243 CHANGING BEHAVIORS TO PREVENT NONCOMMUNICABLE DISEASES
Altering physical and social environments can change behaviors to improve population health
By D. A. Chokshi and T. A. Farley
⇒ GLOBAL HEALTH SECTION P. 1256

1244 LEGISLATORS LEARNING TO INTERPRET EVIDENCE FOR POLICY
Training for making health policy that has the best impact on a population
By A. Cockcroft
⇒ REPORT P. 1346

1247 DIAMOND DYNAMICS UNDER CONTROL
Ultrafast spectroscopy is used to control and manipulate quantum states in diamond By L. Childress
⇒ REPORT P. 1333

1248 INNATE LYMPHOID CELLS SWEETEN THE POT
Immune cells prompt gut epithelial cells to produce carbohydrate nutrients for resident bacteria By L. Y. Hooper
⇒ RESEARCH ARTICLE P. 1310

1250 A GLOBAL STRATEGY FOR PROTECTING VULNERABLE COASTAL POPULATIONS
Short-term emergency response and long-run investments are needed
By E. B. Barbier

BOOKS ET AL.
1252 THE DYSLEXIA DEBATE
By J. G. Elliott and E. L. Grigorenko, reviewed by L. E. Cutting

1253 THE IMPROBABILITY PRINCIPLE
By D. J. Hand, reviewed by E. Limbrick-Oldfield

LETTERS
1254 RETRACTION
By T. Okada et al.

1254 LIVESTOCK CRUCIAL IN HUNGER EQUATION
By M. F. Rothschild and H. Steinfeld

1255 ANCIENT TRADE BETWEEN INDIA AND INDONESIA
By A. Calo

1255 ERRATA
RESEARCH

IN BRIEF

1306 From Science and other journals

RESEARCH ARTICLES

1310 MUCOSAL IMMUNOLOGY
Innate lymphoid cells regulate intestinal epithelial cell glycosylation. Y. Goto et al.

1311 IMMUNOGENETICS
Intersection of population variation and autoimmunity genetics in human T cell activation. C. J. Ye et al.

1312 PHOTOACCLIMATION
Extensive remodeling of a cyanobacterial photosynthetic apparatus in far-red light. F. Gan et al.

1317 PLANETARY DYNAMICS
Chaotic dynamics of stellar spin in binaries and the production of misaligned hot Jupiters. N. I. Storch et al.

REPORTS

1322 LOW-DENSITY MATERIALS
Strong, lightweight, and recoverable three-dimensional ceramic nanolattices. L. R. Meza et al.

1326 WATER SPLITTING
Decoupled catalytic hydrogen evolution from a molecular metal oxide redox mediator in water splitting. B. Rausch et al.

1330 BLACK HOLE PHYSICS
Rapid growth of seed black holes in the early universe by supra-exponential accretion. T. Alexander and P. Natarajan

1333 QUANTUM INFORMATION
Ultrafast optical control of orbital and spin dynamics in a solid-state defect. L. C. Bassett et al.

1337 MAGNETISM
All-optical control of ferromagnetic thin films and nanostructures. C.-H. Lambert et al.

1340 SOCIAL PSYCHOLOGY
Morality in everyday life. W. Hofmann et al.

1343 BIODIVERSITY LOSS
Loss of avian phylogenetic diversity in neotropical agricultural systems. L. O. Prishkoff et al.

1346 MICROBIAL ECOLOGY
Biogeographic patterns in ocean microbes emerge in a neutral agent-based model. F. L. Hellweger et al.

1349 ERROR MEMORY
A memory of errors in sensorimotor learning. D. J. Herzfeld et al.

1354 ICE SHEETS
Boundary condition of grounding lines prior to collapse, Larsen-B Ice Shelf, Antarctica. M. Rebesco et al.

FISH PIGMENTATION

1358 Thyroid hormone–dependent adult pigment cell lineage and pattern in zebrafish. S. K. McMenamin et al.

1362 Local reorganization of anthophores fine-tunes and colors the striped pattern of zebrafish. P. Mahabir et al.

1365 ORIGIN OF NOTOCHORD
Development of the annelid axochord: Insights into notochord evolution. A. Lauri et al.

1369 VIRAL EVOLUTION
Genomic surveillance elucidates Ebola virus origin and transmission during the 2014 outbreak. S. K. Gire et al.

DEPARTMENTS

1221 EDITORIAL
Ebola’s perfect storm
By Peter Piot

NEWS STORIES PP. 1228 & 1229;
GLOBAL HEALTH SECTION P. 1256

1414 WORKING LIFE
The career I dreamed of?
By Gale Rhodes

12 SEPTEMBER 2014 • VOL 345 • ISSUE 6202

Published by AAAS

1217