

Science Service Publication Volume 152, No. 8, August 23, 1997

Thomas Peter Bennett Julie Ann Miller Blair Burns Potter Dan Skripkar

David Lindley Janet Raloff Ivars Peterson

Bruce Bower

Kathleen Fackelmann, Nathan Seppa Ron Cowen Christine Mlot Corinna Wu

Evelyn Strauss Meghan Mitchell Donald R. Harless Publisher Editor Managing Editor Production/Design Director

Associate Editor Senior Editor Environment/Policy Online Editor Mathematics/Physics Behavioral Sciences

Internship Coordinator Earth Science Biomedicine Astronomy

Life Sciences Biology Chemistry/ Materials Science Science Writer Intern Editorial Assistant Business Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$49.50 for 1 year or \$88.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, 1719 N Street, N.W., Washington, D.C. 20036. Preferred 1719 N Street, N.W., Washington, D.C. 20036. Preferred Periodicals postage paid at Washington, D.C., and additional mailing office. POSTMASTER: Send address changes to Science News, P.O. Box 1925, Marion, Ohio 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided. Copyright © 1997 by Science Service. Title registered as trademark U.S. and Canadian Patent Offices. Republication of any portion of Science News without written permission of the publisher is prohibited. For permission to photocopy articles, contact Copyright Clearance Center at 508-750-8400 (phone) or 508-750-4470 (fax).

Editorial, Business, and Advertising Offices 1719 N St. N.W., Washington, D.C. 20036 202-785-2255; scinews@sciserv.org

Subscription Department P.O. Box 1925, Marion, Ohio 43305

For new subscriptions and customer service, call

Visit Science News Online for special features, columns, and references. http://www.sciencenews.org

This Week

116 Navy Recruits Report Abusive Legacy 116 Invasive Argentine ant is no picnic 117 Reservoir of water hides high above Earth 117 Ancient human saunters into limelight 118 Extra calcium no help for lactating women 118 Brain doubles up on marijuanalike agents 119 Polymer, buckyballs combat nerve damage

Cool cars: Running clean on liquid nitrogen

Research Notes

Behavior 122 Earth Science 123 Biology 127

Articles

119

A Fowl Fight 120 124 Mob Action

> Cover: Bacteria join forces to accomplish feats they could not achieve as individuals. A system shared by diverse bacterial species allows the microorganisms to sense their population density and coordinate their behavior in response. This ability enables them to live within a host plant or animal. (Illustration: Laurie Painter)



Departments

Books 114 115 Letters

Science News is published by Science Service, a nonprofit corporation founded in 1921. The mission of Science Service is to advance the understanding and appreciation of science through publications and educational programs.

Board of Trustees — Chairman, Dudley Herschbach; Vice Chairman, Gerald F. Tape; Secretary, David A. Goslin; Treasurer, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Shirley M. Malcom; Eve L. Menger; C. Bradley Moore; Ben Patrusky; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe; Chairman Emeritus, Glenn T. Seaborg; Honorary Trustees, Edward Bliss Jr.; Bowen C. Dees; Elena O. Nightingale; O.W. Riegel; John Troan.

-President, Thomas Peter Bennett; Vice President and Business Manager, Donald R. Harless.

Letters

Ticky point

I greatly admire Science News and have come to depend upon its coverage. In return, I feel it's the responsibility of us, your readers, to inform you of the rare errors that appear in your text. Thus, as others undoubtedly will remind you, ticks are arachnids, not insects ("Thieving bacteria use hot goods in hideout," SN: 7/12/97, p. 23).

Annette Aiello Staff Scientist Smithsonian Tropical Research Institute Ancon, Republic of Panama

Response to change spans theories

In "Humanity's Imprecision Vision" (SN: 7/12/97, p. 26), you differentiate between theories that relate the state of our brain (or mind) to conditions or challenges that we as a species faced during our evolution, and the proposals of R. Potts, which stress the uncertainty of our past environment and its effect on the evolution of our brain.

Isn't the ability to respond to changing conditions just another characteristic of our brain that has developed as a result of the challenge of a variable environment? Is the need to respond to a changing environment fundamentally different from the need to recognize the face of a friend? Is the process that leads to "genes and behaviors that made possible resilient, innovative adaptations to new habitats" fundamentally different from the process that leads to many of the other characteristics of our brain?

Jerry F. Kerrisk

Santa Fe, N.M.

Beta rays' role in restenosis?

I think not.

I have two comments on "Unclogging arteries? Radiation Helps" (SN: 6/14/97, p. 364).

First, I believe you mean iridium-192, not iridium-92 (which doesn't exist).

Second, iridium-192 not only generates

gamma rays, it first emits an energetic electron via beta decay. Characteristic energies of both beta electrons and gamma rays are on the order of 0.3 megaelectronvolt. However, the range of the beta electron in tissue is on the order of 1,000 microns, while that of the gamma ray is about 10 centimeters.

Therefore, given the local nature of the procedure, should we not conclude that the inhibition of restenosis is due to short-range beta, rather than gamma, radiation?

Richard D. Petrasso Principal Scientist Plasma Science and Fusion Center Massachusetts Institute of Technology Cambridge, Mass.

CORRECTION

"Galileo Explores the Galilean Moons" (SN: 8/9/97, p. 90) incorrectly reports that the heat pouring out of Jupiter's moon lo is enough to have melted it 4,000 times. That figure should be 40.

AUGUST 23, 1997

SCIENCE NEWS, VOL. 152

115