

The Weekly Newsmagazine of Science

Science Service Publication Volume 148, No. 1, July 1, 1995

Alfred Scott McLaren Blair Burns Potter Dan Skripkar

Publisher Interim Editor Production/Design Director

David Lindley Janet Raloff Associate Editor Senior Editor Environment/Policy Astronomy

Ron Cowen Bruce Bower Richard Lipkin

Behavioral Sciences Chemistry/ Materials Science Earth Sciences Biology Biomedicine

John Travis Kathleen Fackelmann, Lisa Seachrist

Richard Monastersky

Tina Adler Ivars Peterson Damaris Christensen Cait Anthony Donald R. Harless

Life Sciences Mathematics/Physics Editorial Assistant Books/Resource Manager Advertising/Business

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, Inc., 1719 N Street, N.W., Washington, D.C. 20036. Second-class 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 © 1995 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A. on recycled paper. ♠

Editorial and Business Offices:

1719 N St. N.W., Washington, D.C. 20036 (202-785-2255)

Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Subscription Department:

P.O. Box 1925, Marion, Ohio 43305 For new subscriptions only, call 1-800-247-2160. For customer service, call 1-800-347-6969.

This Week

- 4 Eruptions Spark Explosions of Life
- 4 Viewing frost heave on a microscopic scale
- 5 Heart-y risks from breathing fine dust
- 6 Egyptian fossils illuminate primate roots
- 6 Blood pressure lower for working women
- 7 Early Earth may have had two key RNA bases
- 7 Seals: The love 'em and leave 'em type?

Research Notes

9 Astronomy15 Biology

Articles

13

10 Beyond the Top

Cover: This computer-generated view shows the results of a collision between a proton and an antiproton at Fermilab's Tevatron accelerator. The distinctive pattern of jets and electron and muon tracks emerging from the center of the collision suggests the creation of a top quark in this particular event. (Illustration: Fermilab Visual Media Services)

Bisexual Bugs

Departments

- 2 Books
- 3 Letters



Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the Directory of Student Science Training Programs for Precollege Students.

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; Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. Honorary Trustees — Chairman Emeritus, Glenn T. Seaborg; Edward Bliss Jr.; Bowen C. Dees; O.W. Riegel; John Troan.

President: Alfred Scott McLaren; Vice President and Business Manager: Donald R. Harless.

Letters

Squared coefficient boosts point

Todd Silverstein (Letters, SN: 4/22/95, p.242) might have made his point about the amount of variance accounted for in the lion life span-spot asymmetry data even more forcefully if he had squared the correlation coefficients, as required, to determine the amount of common variance accounted for.

The correlation coefficient of .038 (females) would signify only 0.14 percent common variance, and 0.0844 (males) would be 0.71 percent.

Barlow Soper Professor of Behavioral Sciences Louisiana Tech University Ruston. La.

Human milk: New recruit vs. HIV?

"More ways mother's milk fights disease" (SN: 4/15/95, p.231) describes research into vitamin A derivatives found in mother's milk

and indicates that retinoic acids can reduce the rate at which a herpesvirus colonizes a cell culture. This made me wonder whether any similar research has been conducted into the disease progression associated with HIV infection and AIDS.

There are many questions such research could address:

Are there components of mother's milk (such as retinoic acids) that can slow HIV's ability to replicate? Any slowing of HIV replication could give the infected person's immune system a crucial advantage.

Can the infection-fighting components of mother's milk be used to aid those with impaired immune function—whether or not HIV is slowed? Some studies indicate that drugs that combat herpes can enhance the effectiveness of commonly used AIDS drugs. Apart from the impact on herpes, any infection-fighting capacities would benefit a person with AIDS.

How do some babies born of HIV-positive mothers inherit their mothers' antibodies to HIV but not the infection itself?

As far as I know, newborns represent the only naturally occurring immune-impaired, yet healthy, organisms on the planet. Could we study the dynamics of the infant's development (and its dependence on its mother) for clues about how to address the needs of adults who are living with immune system impairments?

Diana Yates Staten Island AIDS Task Force New York, N.Y.

Address communications to: Editor, SCIENCE NEWS 1719 N Street, N.W. Washington, D.C. 20036 All letters subject to editing.

JULY 1, 1995 SCIENCE NEWS, VOL.148

3