

**THIS WEEK**

Synthetic skin	4
Winter weather forecast	4
Medical ethics at UCLA	5
Amassing the photon	5
Dioxin report	5
Diabetes autoantibodies	5
Milk and lead absorption	5
The making of an antibody	6
Opiates and T cells	6
NASA launches 1981 schedule	7

**RESEARCH NOTES**

Biomedicine	8
Space Sciences	8
Chemistry	9
Physical Sciences	9

**ARTICLES**

Bits of Alaska	10
The cancer war: A report from the front	12

**DEPARTMENTS**

Letters	3
---------	---

**COVER:** Truly a geologic puzzle, the state of Alaska is now believed to be composed of as many as 50 distinct blocks of land, all of which apparently rafted in from different locations and none of which are natively part of North America. For more on Alaska's fragmented history, see p. 10. (Illus. by John Ellis)

<b>Publisher</b>	E. G. Sherburne Jr.
<b>Editor</b>	Robert J. Trotter
<b>Senior Editor and</b>	
<b>Physical Sciences</b>	Dietrick E. Thomsen
<b>Behavioral Sciences</b>	Joel Greenberg
<b>Biomedicine</b>	Joan Arehart-Treichel
<b>Chemistry</b>	Linda Garmon
<b>Earth Sciences</b>	Susan West
<b>Life Sciences</b>	Julie Ann Miller
<b>Policy/Technology</b>	Janet Raloff
<b>Space Sciences</b>	Jonathan Eberhart
<b>Contributing Editors</b>	Lynn Arthur Steen (mathematics) Kendrick Frazier John H. Douglas Michael A. Guillen Joanne Silberner Judy Klein Dale Appleman Betsy Gordon Jane M. Livermore Donald Harless Scherago Associates 1515 Broadway New York, N.Y. 10036 Fred W. Dieffenbach, Sales Director
<b>Science Writer Intern</b>	
<b>Assistant Editor</b>	
<b>Art Director</b>	
<b>Assistant to the Editor</b>	
<b>Books</b>	
<b>Business Manager</b>	
<b>Advertising</b>	

Copyright © 1980 by Science Service, Inc., 1719 N St., N.W., Washington, D. C. 20036. Reproduction of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

**Editorial and Business Offices**  
1719 N Street, N.W.  
Washington, D. C. 20036

**Subscription Department**  
231 West Center Street, Marion, Ohio 43302

Subscription rate: 1 yr., \$19.50; 2 yrs., \$34.00; 3 yrs., \$47.50 (Add \$3 a year for Canada and Mexico, \$4 for all other countries.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code. For new subscriptions only call: (1) 800-247-2160.

Printed in U.S.A. Second class postage paid at Washington, D. C. Title registered as trademark U.S. and Canadian Patent Offices.

Published every Saturday by SCIENCE SERVICE, Inc. 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255)  
ISSN 0036-8423

# LETTERS

**Smile theory**

Theories to explain the "open-mouthed smile" (SN: 12/6/80, p. 160): Among animals, especially canines, exposure of the canine teeth usually signals aggressiveness or intention to attack. As an inherited hangover, that is probably the reason that, among humans, a sneer which involves elevation of the lip on one side of the mouth exposing a canine tooth usually is employed to express disdain, disapproval, or dislike, feelings closely akin to aggressiveness. Among our early ancestors, who probably possessed well-developed canine teeth, their moments of greatest pleasure were certainly when they were partaking of food, in the process of which the lips were opened wide and the canine teeth were exposed. Could our utilization of the smile involving opening the mouth and exposing the teeth which we use to express happiness or approval be an evolutionary hangover of this early manifestation of pleasure in our ancestors?

Edwin B. Steen  
Kalamazoo, Mich.

**Faulty impressions?**

You did not say in so many words that feline leukemia is transmitted from cats to man, but that is certainly the impression created by the story (SN: 8/9/80, p. 88).

The fact that the feline leukemia virus will grow in human cells in the laboratory is not unusual, nor does it mean that the disease will affect humans. Rabies vaccine is grown in duck embryos, but ducks are not susceptible to rabies.

Florence B. Barton, D.V.M.  
Lewiston, Idaho

**Unpredictable stream of thought**

Often as I read SCIENCE NEWS, a particular article will let loose a stream of thought rushing off in an unpredictable direction. Typically, these ideas deserve to be off in the hinterland, but the article "The neutrino's hidden glow" (SN: 11/8/80, p. 292) inspired one which has hung around.

For reasons which are not clear to me, I have always had a predilection for the so-called closed universe, and recent evidence lending support to this view makes pleasant reading. However, deciding on a closed or open universe seems to beg the ultimate question—where did the energy come from? Here precisely is where my idea comes into play. The Uncertainty Principle. Just as virtual particles may come into a sort of Cinderella existence, so much mass for such and such a time, so too a universe may exist. That is: as long as a universe of such and such a mass contracts and vanishes within a certain time limit, the fact that matter was not conserved (more matter than anti-matter) is no problem.

I suppose this too begs the ultimate question, but how interesting if one could develop a physics which would apply from universe to universe throughout some space. There our universe would flash into and then out of existence before we could disturb the eternal perfection of space.

K.R. Roberson  
Houston, Tex.

**Ancient remedy?**

As I read the revelation that researchers at Loma Linda University had recently discovered that activated charcoal may offer relief from flatulence (SN: 11/8/80, p. 301), I am reminded that knowledge is like baked beans, in that unless used, they spoil... and smell.

North American Indians used charcoal for the treatment of gas pains long before our forefathers even knew of the existence of this continent. Charcoal has been used throughout the world by homeopathic physicians for more than 200 years. The Homeopathic Pharmacopoeia of the United States describes the preparation of Carbo Animalis (animal charcoal) and Carbo Vegetabilis (wood charcoal), and states that these have "marked absorptive power of gases."

Rorer has for many years marketed the prescriptive Chardonna, a medication featuring phenobarbital, belladonna extract and "activated charcoal" for the treatment of what the *Physician's Desk Reference* (PDR) describes as: "nervous indigestion, gastritis, flatulence..."

There is probably not an old-time pharmacy or health food store in the country in which Requa's activated charcoal tablets and capsules for "temporary aid in the absorption of intestinal gas causing flatulence" cannot be purchased over the counter, or at least ordered upon request.

If none of these sources were available to the investigators at Loma Linda that charcoal relieved gas before they started their investigations, all they would have had to do was ask anyone who has ever had more than a passing bout with flatulence, as they undoubtedly would already have discovered the effectiveness of activated charcoal for the relief of this distressful condition.

Ronald M. Di Salvo, Ph.D.  
Canoga Park, Calif.

(The Loma Linda study was, in fact, sponsored by Requa Manufacturing Co., which is interested in getting FDA approval for use of their over-the-counter medication, *Charcocaps*, as an anti-flatulent. Currently, *Charcocaps* have category 1 safe-and-effective status for use in acute toxic poisoning; as an anti-flatulent, the medication is in category 3, meaning safe but with as yet undetermined effectiveness. —Ed.)

Address communications to Editor,  
Science News, 1719 N Street, N.W.  
Washington, D. C. 20036  
Please limit letters to 250 words.

SCIENCE SERVICE

Institution for the public understanding of science founded 1921; a nonprofit corporation.

**Board of Trustees**—President, Glenn T. Seaborg, University of California, Berkeley, CA; Vice President, Gerald F. Tape, Associated Universities, Washington, DC; Treasurer, Milton Harris, Washington, DC; Secretary, Julius Duscha, Washington Journalism Center, Washington, DC; Allen V. Astin, Bethesda, MD; Joseph W. Berg Jr., National Research Council, Washington, DC; Edward Bliss Jr., Newburyport, MA; Bowen C. Dees, The Franklin Institute, Philadelphia, PA; David A. Goslin, National Research Council, Washington, DC; Elizabeth Neufeld, National Institutes of Health, Bethesda, MD; O. W. Riegel, Glasgow, VA; Edward W. Scripps II, Edward W. Scripps Trust, Carson City, NV; John Troan, Pittsburgh Press, Pittsburgh, PA; Deborah P. Wolfe, Queens College of City University of New York, Flushing, L.I., NY

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Business Manager: Donald R. Harless.