

cer risk estimates at miniscule doses should not be a surrogate for the environment.

BRUCE N. AMES

Department of Molecular and Cell Biology,  
University of California,  
Berkeley, CA 94720

LOIS S. GOLD

Carcinogenic Potency Database,  
Laurence Berkeley Laboratory,  
Berkeley, CA 94720

#### REFERENCES

1. B. N. Ames and L. S. Gold, *Proc. Natl. Acad. Sci. U.S.A.* **87**, 7772 (1990).
2. B. N. Ames, M. Profet, L. S. Gold, *ibid.*, p. 7777.
3. ———, *ibid.*, p. 7782.
4. B. N. Ames, *Free Rad. Res. Comms.* **7**, 121 (1989).
5. National Research Council, *Diet and Health, Implications for Reducing Chronic Disease Risk* (National Academy Press, Washington, DC, 1989); *Diet, Nutrition, and Cancer* (National Academy Press, Washington, DC, 1982).
6. J. T. MacGregor, R. Schlegel, C. M. Wehr, P. Alperin, B. N. Ames, *Proc. Natl. Acad. Sci. U.S.A.*, in press.
7. B. N. Ames, R. Magaw, L. S. Gold, *Science* **236**, 271 (1987).
8. J. Higginson, *Cancer Res.* **48**, 1381 (1988).
9. L. S. Gold, G. M. Backman, N. K. Hooper, R. Peto, *Environ. Health Perspect.* **76**, 211 (1987).
10. D. G. Hoel, J. K. Haseman, M. D. Hogan, J. Huff, E. E. McConnell, *Carcinogenesis* **9**, 2045 (1988).
11. J. A. Swenberg *et al.*, *Environ. Health Perspect.* **76**, 57 (1987).
12. M. L. Cunningham and H. B. Matthews, *Environ. Mol. Mutagen.* **15** (suppl. 17), 14 (1990); M. L.

- Cunningham, R. Maronpot, J. Foley, H. B. Matthews, *Toxicologist* **10**, 181 (1990).
13. H. A. Dunsford, S. Sell, F. V. Chisari, *Cancer Res.* **50**, 3400 (1990).
14. F. J. C. Roe, *Mutagenesis* **4**, 407 (1989); E. Lok *et al.*, *Cancer Lett.* **51**, 67 (1990); T. D. Heller, P. R. Holt, A. Richardson, *Gastroenterology* **98**, 387 (1990).
15. S. H. Moolgavkar and A. G. Knudson, *J. Nat. Cancer Inst.* **66**, 1037 (1981); S. M. Cohen and L. B. Ellwein, *Science* **249**, 1007 (1990).
16. D. Hoel and C. Portier, in preparation.
17. L. Bernstein, L. S. Gold, B. N. Ames, M. C. Pike, D. G. Hoel, *Fundam. Appl. Toxicol.* **5**, 79 (1985).
18. L. M. Brown and L. M. Pottern, *Environ. Res.* **34**, 250 (1984).
19. A. Smith *et al.*, in preparation.
20. D. W. Gaylor, *Reg. Toxicol. Pharm.* **9**, 101 (1989).
21. R. J. Zeckhauser and W. K. Viscusi, *Science* **248**, 559 (1990); *Regulatory Programs of the U.S. Government, April 1 1990–March 31 1991* (Office of Management and Budget, Washington, DC, 31 August 1990).
22. A. S. Blinder, in *Hard Heads, Soft Hearts* (Addison-Wesley, Reading, MA, 1987), pp. 136–159.

#### The Avocado Illusion

An interesting review by Dennis R. Proffitt (28 Sept., p. 1590) of the book *The Moon Illusion* by Maurice Hershenson calls to mind a strong and possibly related illusion that I have not seen described previously.

At the risk of having this observation

mistaken for buffoonery, I refer to the apparent size of avocados and other fruit which, when overhead in the tree, appear 20 to 50% larger than when brought down to eye level. I have noticed this for several years and have discussed it with other lay observers who confirm the illusion. Some of the effect should undoubtedly be attributed to disillusion rather than illusion. However, I find a similar effect with a tennis ball hung in the upper branches.

The fact that this "avocado illusion" is exactly the opposite of the moon illusion is an intriguing aspect that should be of interest to students of experimental psychology.

Although this report may generate a smile, it is not a canard. As illusions go, this one is very real. Or at least, it seems to be.

PAUL E. SANDORFF

121 West Avenida Cordoba,  
San Clemente, CA 92672

*Erratum:* In Marcia Barinaga's Research News article "Biology goes to the movies" (30 Nov., p. 1204), the journal *Anatomical Record* was incorrectly referred to as the "Antomical Review" at the end of the third column on page 1205.

*Erratum:* In the Erratum (7 Dec., p. 1320) about the Editors' response to George Legge's letter of 16 November (p. 889), the error was not corrected: Reference should have been made to a "300-nm beam spot," not a "300- $\mu$ m beam spot."

## Biological Systems

Edited by Barbara R. Jasny and Daniel E. Koshland, Jr.

The most important biological systems used in research today are explored in this extensive collection of articles from *Science* magazine. The authors describe these major experimental systems in terms of the state of the art and the potential advantages and possible disadvantages of each system.

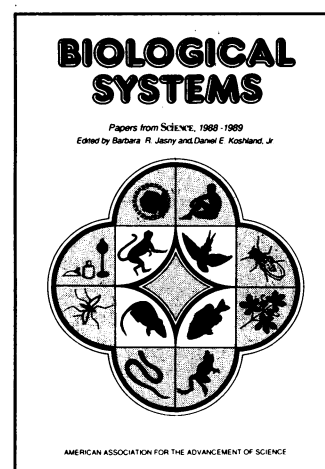
Organisms explored range from retroviruses to humans. Biological processes in which they have been applied include those of developmental and molecular biology, genetics, immunology, and behavior. Use of genetic engineering to design optimal systems for basic research and the biotechnology industry is also discussed.

The information presented will be especially useful to graduate students and as well as to all researchers interested in learning the limitations and assets of biological systems currently in use.

**Order from:** AAAS Books, Dept. A22, P.O. Box 753, Waldorf, MD 20604 (FAX: 301-843-0159). To order by phone (VISA/MasterCard only), call 301-645-5643 (9am-4pm ET) and ask for AAAS. Individuals must prepay or use VISA/MC. For purchase orders, add \$3.50 postage and handling. Please specify item #89-16S, and allow 2-3 weeks for delivery. For shipments to CA, add sales tax.

**AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE**

New from AAAS!



1990; 288 pp.; softcover;  
ISBN #0-87168-351-2;  
fully indexed and illustrated

#89-16S; \$31.50  
(AAAS members \$24.95)