

molecular weight (1). The ultimate cure for the greenhouse should involve recycling of atmospheric carbon, not simply creating additional storage in various reservoirs. A marine farm has good potential for recycling carbon and reducing atmospheric pollution through production of clean-burning fuels. We urge that consideration be given to "Johnny Kelpspore and the Greenhouse."

HOWARD A. WILCOX  
882 Golden Park Street,  
San Diego, CA 92106

WHEELER J. NORTH  
W. M. Keck Engineering Laboratories,  
California Institute of Technology,  
Pasadena, CA 91125

#### REFERENCES

1. K. T. Bird and P. H. Benson, *Seaweed Cultivation for Renewable Resources* (Elsevier, Amsterdam, 1987).
2. R. Streichenberger and W. J. North, unpublished data.

The Global ReLeaf effort described by Gregory Byrne (News & Comment, 21 Oct., p. 371) may be a worthwhile effort aimed at reducing atmospheric carbon dioxide. The proposed 100 million trees would certainly absorb carbon dioxide, but the impact on the carbon dioxide production-destruction equation is likely to be far great-

er than that suggested in the article. American Forestry Association executive vice president R. Neil Sampson is quoted as saying, "Those [trees] planted in urban areas would . . . help shade residences, leading to a savings in air-conditioning costs of \$4 billion a year." That cost represents about 6% of all U.S. residential electricity consumption and the avoided combustion of 16 billion tons of coal. Avoiding the release into the atmosphere of about 60 billion tons of carbon dioxide, three times what is absorbed by all the trees.

If the estimates of the American Forestry Association are correct, high priority should be placed on the planting of trees in locations where they shade air-conditioned structures, as those trees may have about four times the impact in decreasing atmospheric carbon dioxide as trees planted in other locations.

JAMES SWARTZ  
Department of Chemistry,  
Grinnell College,  
Grinnell, IA 50112-0806

I read with interest Byrne's article "Let 100 million trees bloom." The article points out that 100 million additional trees would remove about 18 million tons of carbon dioxide from the atmosphere each year and

then goes on to state, "an estimated 6 billion tons of carbon dioxide from fossil fuels enter the atmosphere each year." The 100 million trees would therefore remove about 0.3% of the additional carbon dioxide.

A few simple calculations show that *all* of the additional carbon dioxide introduced by fossil fuels could be removed by a 2% increase in the quantity of phytoplankton in the world's oceans. We have effected marvelous improvements in the production of land-based plants. Could we not produce a 2% increase in the ocean's phytoplankton?

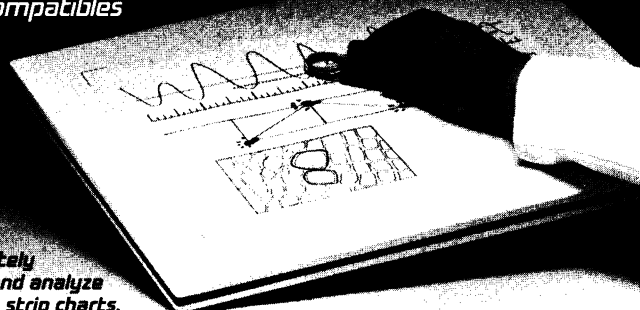
HORST HOYER  
165 Watchung Avenue,  
Montclair, NJ 07043

**Erratum:** In the report "Single-chain antigen-binding proteins" by Robert E. Bird *et al.* (21 Oct., p. 423), references 17 and 18 were inadvertently interchanged. Reference 17 should have been to J. S. Huston *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **85**, 5879 (1988), and reference 18 should have been to D. Scandella, P. Arthur, M. Mattingly, and L. Neuhold, *J. Cell Biochem.* **9B**, 203 (1985).

**Erratum:** The proportion of dogs among animals used in research was incorrectly reported in Constance Holden's article "Billion dollar price tag for new animal rules" (News & Comment, 4 Nov., p. 662). Dogs make up about 1% of research animals, according to the Office of Technology Assessment. Primates make up about 0.05%.

## SigmaScan™ measures areas, lengths coordinates, angles, slopes, and more —

IBM PC and Compatibles



Quickly and accurately  
digitize, measure and analyze  
photomicrographs, strip charts,  
X-rays, maps, and more — using  
your own PC.

- Areas, lengths, angles, and slopes
- X,Y digitizing
- User-defined units
- Standard ASCII data output  
(use in Lotus, dBase, etc.)
- Keyboard macros
- User-defined data transforms

Save hundreds of hours annually over  
manual measurement techniques.  
Automate complex analyses. Comes  
complete with software, choice of  
digitizing tablet, money-back guarantee  
and full year hardware warranty.

Sigma-Scan™ software is also  
available separately.

SCIENTIFIC

Announcement and call for Abstracts for  
Conference on

### Multidrug Resistance; Molecular Biology and Clinical Relevance

April 10-11, 1989  
Bethesda Marriott Hotel  
Bethesda, Maryland

Monday, April 10, 1989

Morning Session:  
*Genetics and Biology of the  
Multidrug Transporter (P-Glycoprotein)*  
Afternoon Session:

*Molecular Diagnosis of Multidrug-Resistance*

Tuesday, April 11, 1989

Morning Session:  
*Reversing Multidrug-Resistance*  
Afternoon Session:  
*Cellular Responses to DNA Injury and  
other Forms of Drug Resistance*

Conference Organizers:  
Bruce Chabner, M.D.  
Michael Gottesman, M.D.

To receive conference registration and abstract  
submission information, please call or write to:  
Abbe Smith or Debra Casey  
Technical Resources, Inc.  
3202 Tower Oaks Blvd.  
Rockville, MD 20852  
301 • 770 • 3153

Deadline for abstract submission is **February 1**  
Deadline for conference registration is **March 1**

Circle No. 214 on Readers' Service Card