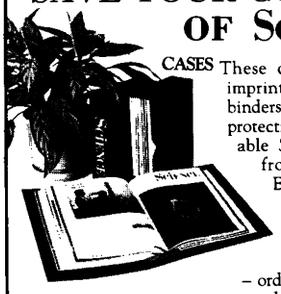
SAVE YOUR COPIES OF SCIENCE



CASES These custom-made, imprinted cases and binders are ideal for protecting your valuable *Science* copies from damage. Each binder or case holds one volume of *Science*, or 13 weekly issues – order four binders or cases to hold a complete year of issues. Constructed from reinforced board and covered with durable, leather-like red material and stamped in gold, the cases are V-notched for easy access; binders have a special spring mechanism to hold individual rods which easily snap in.

BINDER

Cases	1 – $7.95	2 – $14.95	4 – $27.95
Binders	1 – $9.95	2 – $18.95	4 – $35.95

SCIENCE
Jesse Jones Industries, Dept. SCE
499 East Erie Ave., Philadelphia, PA 19134

Enclosed is $_____ for _____ Cases; _____ Binders. Add $1 per case/binder for postage & handling. Outside USA $2.50 per case/binder (US funds only). PA residents add 7% sales tax.

Print Name _____

Address _____
No P.O. Box Numbers Please

City _____

State/Zip _____

CHARGE ORDERS (Minimum $15): Am Ex, Visa, MC, DC accepted. Send card name, #, Exp. date.

CALL TOLL FREE 7 days, 24 hours 1-800-825-6690
Outside the US call 215-425-6600

– SATISFACTION GUARANTEED –

2,3,7,8 tetrachlorinated dioxin. This exceeds the EPA estimates of total current anthropogenic emissions in the United States by an order of magnitude.

—***Philip H. Abelson***

■

The D_2 Receptor Gene

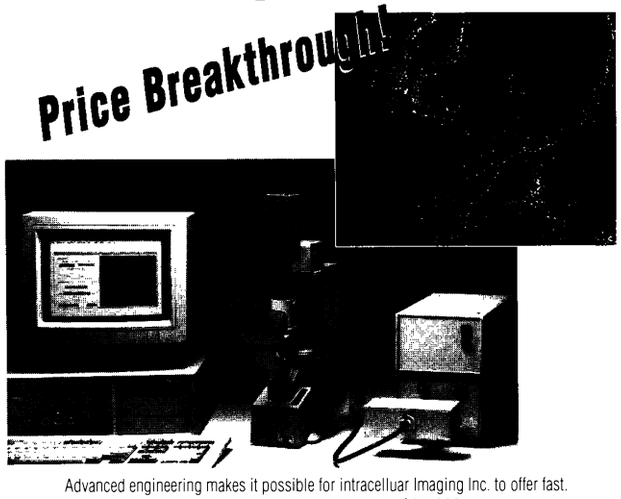
Kenneth Blum and Ernest P. Noble (Letters, 2 Sept., p. 1346) incorrectly imply that we have demonstrated (Articles, 17 June, p. 1715) that the gene encoding the dopamine D_2 receptor locus (*Drd2*) influences several responses to alcohol, morphine, and cocaine in the mouse. We would like to clarify our interpretation of the data we presented (in our original figure 2) and reiterate our intent in creating the composite figure representing genetic influences on drug responses.

The method of quantitative trait locus (QTL) gene mapping allows identification of the tentative chromosomal positions of the genes influencing traits showing multigenic inheritance (*1*). We applied the QTL method to data from our own and others' laboratories to seek patterns of association that might suggest hypotheses regarding commonality of genetic control of multiple drug responses. We indeed reported preliminary evidence suggesting that several drug-related behaviors are tentatively associated with marker loci in a region of mouse chromosome 9 near the gene *Drd2* (*2*). However, we are rather less sanguine than Blum and Noble appear to be about the interpretation of this pattern of results. As we tried to make clear, the composite map we presented was designed to stimulate hypothesis generation, not to serve as a springboard for jumping to conclusions.

We briefly reiterate here the important reasons for not assuming that this pattern of association shows that the *Drd2* gene is the QTL mapped in each case (our original note 76). First, the associations presented in the figure represent tentative assignments of genetic association and need to be verified in a segregating F_2 or backcross population [our original notes 69 and 74; see also (*3*)]. While we expect that the majority of the provisional QTLs will be confirmed by further, rigorous tests with F_2 or backcross populations, only two QTLs for responses in the *Drd2* region have thus far been tested and verified. Contiguity of multiple verified QTLs in a relatively small region of chromosome 9 could reflect several causes (our original note 76). Each trait could be influenced by a different gene. Some (or all) could be affected by the same gene, or a gene cluster. Finally, all could be affected by

Ca^{2+} & pH Imaging

Price Breakthrough!



Advanced engineering makes it possible for intracelluar Imaging Inc. to offer fast, high resolution, ratiometric imaging systems for only **$27,000**, installed!

InCa++ dual wavelength systems come with everything you need:

- Nikon inverted microscope
- Fluorescence optics
- Automatic filter changer
- Low-light level CCD camera
- InCa for Windows™
- Pentium PC

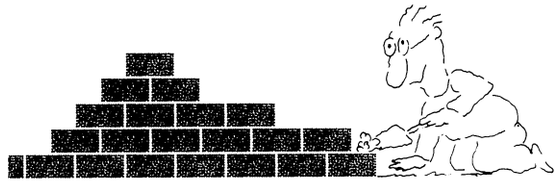
Single wavelength systems for $16,000.
For information call: **(800) 401-3553**

Visit us at the ASCB and NeuroSci Meetings.
Reseller inquiries welcome.

INTRACELLULAR IMAGING INC.

Circle No. 17 on Readers' Service Card

We'll Help You Build A New Lab



Let the free Science product information service put you in touch with the vendors whose products you will need.

Simply write us a letter stating the specifics about your proposed lab and the instruments and supplies you need. We will do the rest. Write to:

SCIENCE Magazine
New Lab Service Department, Rm. 830,
1333 H Street, N.W.,
Washington, DC 20005

The Global Weekly of Research
SCIENCE

the same single gene. Any of these genes could be, but is not necessarily, the *Drd2* gene. We agree with Blum and Noble that a single gene can influence a complex trait (ascertaining the location of such genes is the point of QTL mapping), but it is specious to insinuate that David Goldman or any other geneticist would disagree. All of the drug responses that we found to be associated with markers in the region near *Drd2* also were associated with markers in several other regions of other chromosomes. The enthusiasm of Blum and Noble notwithstanding, dopamine remains an important neurotransmitter in determining some drug responses, and the D_2 receptor may also have a role. Much more work will be necessary to test these hypotheses in available genetic animal models. The QTL method is one among many approaches discussed in our article that should allow the ultimate clarification of any possible role of dopamine D_2 receptor variants in alcoholism.

John C. Crabbe
Departments of Medical Psychology and Pharmacology, Oregon Health Sciences University, and Veterans Administration Medical Center, Portland, OR 97201, USA
John K. Belknap
Department of Medical Psychology, Oregon Health Sciences University, and Veterans Administration Medical Center, Portland, OR
Kari J. Buck
Vollum Institute for Advanced Biomedical Research, and Department of Medical Psychology, Oregon Health Sciences University

References

1. E. S. Lander and D. Botstein, *Genetics* **121**, 185 (1989).
2. D. L. Smith *et al.*, *Mouse Genome* **90**, 439 (1992).
3. J. K. Belknap, *Behav. Genet.* **22**, 677 (1992).

Corrections and Clarifications

In the article "Genetic dissection of complex traits" by Eric S. Lander and Nicholas J. Schork (30 Sept., p. 2037), on page 2038, in column 2, under "*Other transmission mechanisms*," the second sentence should have begun, "These include mitochondrial inheritance (in which mitochondria pass solely through the maternal germ line. . . ."

In the response by E. A. Finch and S. M. Goldin (5 Aug., p. 813) to the technical comment "Calcium and inositol 1,4,5-trisphosphate–induced Ca^{2+} release" by L. Combettes and P. Champeil (5 Aug., p. 813), in parts B and C of figure 1 (p. 814), the insets referring to Ca concentrations were inadvertantly interchanged. The concentration for figure 1B should have been, "300 nM Ca" and that for figure 1C should have been, "10 nM Ca."

Celebrate
150 years
of Scientific Advancement

In 1998, the American Association for the Advancement of Science (AAAS) will celebrate the 150th anniversary of its founding. A commemorative postage stamp would be a fitting tribute to the Association's historic efforts to promote the progress of science and engineering in the service of humankind.

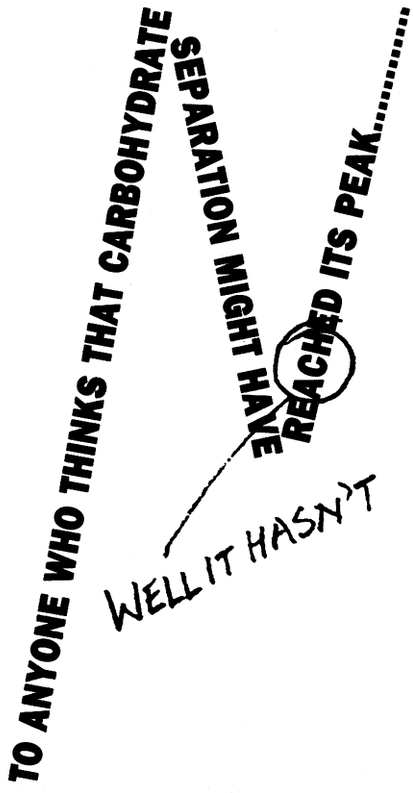
BUT YOUR HELP IS ESSENTIAL.

We need letters expressing support for a AAAS commemorative stamp as well as ideas for the stamp's theme and design.

Please write promptly to:

The AAAS Commemorative
Postage Stamp Committee
Office of Communications
Room 801
1333 H Street, NW
Washington, DC 20005

or call: 202-326-6440



Signal™ fluorescent labelling and GlycoSep™ HPLC columns allow cost-effective, quantitative and preparative profiling of charged and neutral glycans.

Signal™ Fluorescent Labelling
Signal™ is a simple, convenient method of fluorescent labelling a glycan pool. The technique utilizes 2-aminobenzamide (2-AB) in a validated, 2 step procedure that labels glycans efficiently (>85%) and non-selectively at the reducing terminus.

GlycoSep™ High Resolution Glycan Profiling
GlycoSep™ is an HPLC based kit that allows 2 dimensional profiling of 2-AB labelled glycans, providing reproducible, quantitative results. As no high pH conditions are used, structural integrity is assured and sample isolation and work-up is easy.

To find out how Signal™ and GlycoSep™ can extend your carbohydrate-related research, call us today.

800-722-2597

Oxford GlycoSystems

Oxford GlycoSystems Inc. Cross Island Plaza, 133-33 Brookville Boulevard, Rosedale, New York 11422 U.S.A.

Circle No. 33 on Readers' Service Card