

one can guarantee your success, but Reichert has designed its new Diastar microscope so that your research proceed as smoothly as possible.

Diastar is easier to use. The Diastar systems provide impeccable imaging so whatever your specialty, the results are clear and reliable; and the Diastar has the highest quality reproduction—by slides and prints that capture the essence of your discovery. All of this at a price well below what you would expect to pay for a microscope of this quality.

to further help you achieve your goals...

Reichert provides a variety of useful services and services to assist in your specialty: Free trial of the Diastar in your laboratory; a free technical manual by which you can learn practical ways to improve your microimaging; and a toll-free telephone line to Reichert technical advisers can assist in answering some of your more interesting questions.

Sharp and flat imaging: Diastar optics

Reichert's Plan achromatic objectives provide optimal clarity and flatness of

Advanced camera system

The Photostar camera system contains a microprocessor that automatically controls all camera functions.

Computer corrected exposure

The quick sequence you're ready to shoot: Focus the cross hair and specimen, and expose. No third eye tube is necessary.

Evaluation: And Posters

To evoke your interest in the new Diastar, Reichert offers you a prompt and full evaluation of this microscope. At no cost.

Contact your Reichert area sales representative, or call 800-828-1200, (800-462-1221). We'll arrange a demonstration in your laboratory. And don't forget to ask for your free posters. Call toll-free or circle the reader service number or fill in the attached coupon and the set is yours!

FOR FREE POSTERS

Please send me more product information.

Please have a representative contact me.

Name

Number

sequences, such events could lead to the potentially harmful production of packageable infectious recombinant virus. Since avoidance of any homology with endogenous retroviruses is thus desirable, Anderson suggests using mouse retroviral vectors as a delivery system. However, quite apart from the putative inherent instability of recombinant retroviruses, this proposal is probably insufficient to overcome the recombination problem. This is because sequences with homology to mouse mammary tumor virus (1), Moloney murine sarcoma virus (2), Abelson murine leukemia virus (3), and Moloney murine leukemia virus (4) have recently been found in the human genome. Indeed, sequences containing murine retrovirus long terminal repeats (LTR's) have been employed in the screening of human genomic libraries (5).

There would appear to be two alternative means of circumventing this problem which would eventually enable murine vectors to be used in human gene therapy. Every such attempt would have to be preceded by a search for vector-homologous sequences in the patient's genome by Southern blotting. If sequences homologous to murine retroviral vectors currently in use are indeed found to be common in human genomes, as suggested by the work of Repaske *et al.* (4), alternative vectors derived from more distantly related species would have to be considered. Clearly, considerable attention will have to be directed toward the construction and experimental trial of appropriate retroviral vectors in order to optimize any future gene delivery system for use in humans.

DAVID N. COOPER

*Institut de Biologie Animale,
Université de Lausanne,
CH-1015 Lausanne, Switzerland*

References

1. R. Callahan *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **79**, 5503 (1982).
2. R. Watson, M. Oskarsson, G. F. Vande Woude, *ibid.*, p. 4078.
3. N. Heisterkamp *et al.*, *Nature (London)* **306**, 239 (1983).
4. R. Repaske *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **80**, 678 (1983).
5. M. A. Martin *et al.*, *ibid.* **78**, 4892 (1981).

David Cooper raises a legitimate concern regarding possible recombination between murine leukemia virus (MuLV)-based viral vectors and endogenous retroviral sequences present in the human genome. In fact, recombination between a deletion mutant of Moloney MuLV and homologous sequences in mouse DNA involving a 400-base-pair segment that was 78 percent homologous

has recently been demonstrated (1). To evaluate possible recombination between MuLV's and human endogenous retroviral sequences, mouse cells have been cotransfected with defined *gag* and *pol* deletion mutants of Moloney MuLV (2) and cloned *gag* and *pol* segments of endogenous human retroviral DNA's. In no case could recombination be demonstrated. Although the deduced amino acid sequences comprising the *gag* and *pol* regions of endogenous human retroviral sequences are evolutionarily related to comparable segments of MuLV's (3), the extent of polynucleotide sequence identity may be too low for homologous recombination. For example, the *gag* and *pol* regions of human endogenous MuLV sequences are only 35 percent and 44 percent, respectively, related to analogous segments of MuLV. Furthermore, nucleotide sequencing of several different human endogenous retroviral clones (4) has indicated the presence of point mutations, inappropriate terminator codons, and deletions of various sizes, any one of which could render recombinants that might be generated replication defective.

MALCOLM A. MARTIN

*Laboratory of Molecular Microbiology,
National Institute of Allergy and
Infectious Diseases,
National Institutes of Health,
Bethesda, Maryland 20205*

STEPHEN P. GOFF

*Department of Biochemistry and
Institute for Cancer Research,
Columbia University, College of
Physicians and Surgeons,
New York 10032*

W. FRENCH ANDERSON

*Laboratory of Molecular Hematology,
National Heart, Lung and Blood
Institute, National Institutes of
Health, Bethesda, Maryland 20205*

References

1. P. Schwartzberg, J. Colicelli, S. P. Goff, *J. Virol.* **53**, 719 (1985).
2. ———, *ibid.* **49**, 918 (1984); *Cell* **37**, 1043 (1984).
3. R. Repaske *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **80**, 678 (1983).
4. R. Repaske *et al.*, *J. Virol.*, in press.

Erratum: The name of M. Wallroth was omitted as the fourth author of the report "A simple and general method for transferring genes into plants" by R. B. Horsch *et al.* (8 Mar., p. 1229).

Erratum: In the legend for figure 2 of the report "Plasmodium falciparum malaria: Band 3 as a possible receptor during invasion of human erythrocytes" by V. C. N. Okoye and V. Bennett (11 Jan., p. 169), a reference for the use of metrizamide to purify schizonts was inadvertently omitted after the fifth sentence. It should have read, "Following the method of C. S. Pavia *et al.* [*Am. J. Trop. Med. Hyg.* **32**, 675 (1983)], as modified by Lyons."

Erratum: In figure 1 of the report "How bees remember flower shapes" by J. L. Gould (22 Mar., p. 1492), the results shown for the 24-element patterns (K₁ and K₂) should have been $P > 0.05$.