

from a particle is proportional to the square of its volume (Rayleigh region). Thus a particle 50 nanometers in diameter will generally scatter four times as much light as one with half that diameter. The slope of the DLS pattern near forward scattering (small scattering angles) generally becomes steeper as the average particle size increases.

Wines F and G have the smoothest DLS patterns and also the shallowest slopes. At large scattering angles the patterns are nearly horizontal. These wines thus seem to consist predominantly of molecular contributions with most of the precipitable, large particles having been removed (say, above 500 nanometers). These two wines were judged to have superior relative taste, and their manufacturers had obviously devoted considerable effort to "polishing" them. Although wine B, for example, produced about as much total light scattering as wines F and G, its DLS pattern is irregular and considerably steeper than the patterns of the other two. Its relative taste quality did turn out to be rather poor.

The DLS pattern of wine C was also quite noisy (large particulates present, although at substantially lower concentrations than A, B, D, and E), yet its overall pattern was depressed—even relative to F and G. It contains, therefore, smaller molecules than either F or G, probably smaller than needed to produce a good body. Had its manufacturer devoted more attention to the removal of the larger particulates, wine C could well have had a taste quality exceeding those of both F and G, since these large particulate residues seem to correlate with poor quality.

As is evident from Table 1, most of the wines would never have been purchased by any of the panel at any price had they known *a priori* how they tasted. The two wines producing good-quality DLS patterns (F and G) pleased everyone. I do not propose that every wine consumer go out and purchase an expensive laser light-scattering photometer to help select wine, but I am firmly convinced that, were a copy of the wine's DLS pattern or a quantitative parameterization thereof available, the selection process would be greatly simplified and certainly far easier to understand than most media hype on the subject. The consumer might be able then to buy wines according to a rating system similar to the Environmental Protection Agency's mileage ratings comparing automobiles.

PHILIP J. WYATT

Science Spectrum, Inc.,
Santa Barbara, California 93105

References

1. P. J. Wyatt, *Appl. Opt.* **7**, 1879 (1968); *Nature (London)* **221**, 125 (1969); L. V. Reich, *Infect. Immun.* **10**, 963 (1974); P. J. Wyatt and D. T. Phillips, *J. Agric. Food Chem.* **24**, 984 (1976).
2. V. R. Stull, *Clin. Chem.* **19**, 833 (1973).
3. M. Kerker, *Ind. Eng. Chem.* **60**, 30 (1968).

Koop's Candidacy

The controversy surrounding the candidacy of C. Everett Koop for the Office of Surgeon General, as reported by Marjorie Sun (News and Comment, 24 Apr., p. 422) is as frightening as the McCarthy or Nixon eras, and for similar reasons. In those times many honest persons who lived and acted according to their consciences and within the law were either denied their rights to work as they chose and to serve their government, or they lived in realistic fear of loss of these rights. It seems to me that Koop is being subjected to similar extralegal pressures.

It is altogether appropriate to scrutinize Koop to ensure that he is a capable administrator and that he will administer the law as written, as was done with Joseph Califano when he was proposed as Secretary of the Department of Health, Education, and Welfare in the Carter Administration. The forces opposed to Koop do not, however, recommend this. They have prejudged him on these issues, found him guilty, and therefore proclaim him unqualified.

It is understandable that those whose livelihood involves counseling abortion or performing abortions, and those who feel abortion is every woman's right, would object to an ardent pro-lifer as Surgeon General, but the principle of applying a moral or philosophical litmus test of any sort to candidates for public office is far more dangerous than temporary occupancy of an office by an individual whose ideas differ from one's own.

JAMES BAGGOTT

18 Ardmore Avenue,
Lansdowne, Pennsylvania 19050

Owl Monkey Cell Line

I would like to amplify a statement which appears in the article "A diversion of the quest for truth" (News and Comment, 6 Mar., p. 1022). This article deals with the unfortunate contamination of purported human Hodgkin's disease cells with a cell line from owl monkey kidney in John Long's laboratory at Massachusetts General Hospital. I refer to the quotation (p. 1023), "O'Brien had

studied the lines [sent by Long] with a panel of six enzyme tests, and assured [Nancy] Harris that they were of human origin."

Actually, we typed the lines in the summer of 1979 and found certain enzyme phenotypes that were consistent with a human origin and two others that were unusual. We reported this to Long. These enzyme systems were not diagnostic with respect to species identification; rather they were selected to discriminate between different individuals within a group of human cells [S. J. O'Brien *et al.*, *In Vitro* **16**, 119 (1980)], as had been requested by Long. An expanded series of species-specific isozyme systems were examined in January 1980 at the request of Harris in order to clarify the question of their identity. Results of these tests confirmed the conclusion (also derived by Walter Nelson-Rees using karyology) that the origin of the cell lines was nonhuman. Our conclusions at this time were the first considered opinions of species origin that we gave.

STEPHEN J. O'BRIEN

Genetics Section, Laboratory of Viral
Carcinogenesis, National Cancer
Institute, Bethesda, Maryland 20205

Meeting Requirements

In connection with Eliot Marshall's Briefing (News and Comment, 1 May, p. 525) that education majors scored lowest as a group on a test of "global awareness," readers might bear in mind that education majors are the only group whose curriculum is more than one-third prescribed by some agency of government.

Education majors are so busy meeting requirements for certification—requirements of no demonstrated validity—that they have no time to learn about the globe.

HOWARD F. LONG

Juniata College,
Huntingdon, Pennsylvania 16652

Erratum. In the letter from Bailus Walker, Jr. (22 May, p. 875), option (ii) in the second paragraph should have read: "general laboratory guidelines which would be mandatory only for work with those substances regulated by OSHA health standards for general industry. . . ."

Erratum. In the Meeting Highlight "Caffeine's stimulatory effects explained" (Research News, 27 Mar., p. 1408), the adenosine molecule should have been represented as follows:

