Editorial

## Scientific misconduct and the blind eye

Is scientific misconduct on the rise, or is it simply getting more attention and publicity? Recently, a highprofile case of scientific misconduct came to an unsatisfactory close. I say unsatisfactory because after years of accusations, in-depth investigative reports in newspapers, and a long investigation by scientific authorities, the charges of scientific misconduct against Robert Gallo were dropped. Gallo stood accused of scientific misconduct of the gravest kind. In essence he was accused of "stealing" a virus - a virus shared with him in the best spirit of scientific advancement by Luc Montagnier of the Pasteur Institute in Paris, France-and then claiming to have discovered this virus, the virus that causes AIDS. As a result of the dropped charges, Gallo claims to be exonerated and vindicated. Now we are left wondering whom to believe.

Scientific misconduct is a fact of life. There are scoundrels and charlatans in all areas of life and there is no reason to suppose that just because we claim to be "doctors" or "scientists" we are therefore somehow on an elevated plane from the rest of society and free of cheating and stealing among our members. What we must do is to accept that misconduct will occur and thoroughly investigate all accusations. Perhaps by education and publicity, fraud in science may be minimized. It simply is not acceptable to take the position that misconduct is so rare in science or the profession that it can be ignored—it is not. Too often the professional equivalent of the police officer's "code of silence" is effective at covering up scientific fraud or misconduct.

The New York Times reported on a study published in American Scientist (November 12, 1993) which documented that 43% of students and 50% of faculty members had direct knowledge of misconduct. While the study did not address how much misconduct occurs in science, it did shed some light on the perceptions of students and faculty members. Fifty-three percent of students believe they would experience retaliation if they reported misconduct of faculty or fellow students — yet the willingness to report the misconduct of others is a key element of student honor codes, which are common at our dental schools. If a student is not willing to report a case of misconduct then the honor code system will never work. Recently a judge in Michigan ordered the University of Michigan to pay \$1.2 million in damages to a scientist after it was proved to a jury that the scientist's supervisor had stolen credit for her research and that the university had failed to properly investigate the scientist's complaint. What can motivate the lack of a proper investigation other than attempts to cover up wrongdoing?

Presently, the University of Minnesota is in the midst of a major embarrassment involving a world-famous transplant surgeon, Dr. John Najarian. For 22 years, Najarian ran the Minnesota anti-lymphocyte globulin (MALG) program from his base as Chairman of the Department of Surgery. In 1970 he applied to the US Food and Drug Administration (FDA) for an Investigational New Drug application for equine ALG. Federal law in the United States imposes strict guidelines and controls on investigators of new drugs and the FDA informed Najarian within weeks of his application that "no interstate sale of the drug was legal until and unless the FDA determined, after clinical study, that the drug was both safe and effective." For 22 years the MALG program manufactured, distributed, and sold 20 different products, none of which were approved by the FDA for anything other than investigational non-commercial use, to hundreds of institutions for total sales of nearly \$80 million.

While misconduct in the scientific community may appear to be on the rise, it surely has been with us for years. In the past, it has been common to follow the method of Admiral Horatio Nelson who, from the deck of his flagship, the *Victory*, turned a blind eye to unwanted orders. While this worked for Nelson, it cannot be tolerated in our universities or the health care community. Scientific misconduct affects the public welfare and it is far too serious to be protected by neglect, or worse, by a code of silence.

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