

CORRESPONDENCE

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Industry Support of Research and Conflict of Interest

To the Editor:—The recent editorial in ANESTHESIOLOGY addressing "Unresolved Issues Relating to Peer Review, Industry Support of Research, and Conflict of Interest"¹ was timed appropriately, as clinical income is decreasing among academic anesthesia departments and dependence upon research funds from industry will likely to increase.

Young faculty with research interests will continue to need sources of funding to initiate projects and generate preliminary data to apply for support from competitive granting agencies. Traditionally, clinical income has supported otherwise unfunded research endeavors. Now, funds from industry certainly will play a more dominant role in the development of the careers of young academicians, as well as the development of our specialty.

An additional unresolved issue is one that can be thought of as "the tail wagging the dog." With mounting pressures to obtain external funding, individuals no longer will be guided to explore original ideas that they consider to be of intellectual and scientific interest but will be motivated first to obtain funding (by any available route) and only then address the issues and questions posed by the source of the funding. An extreme example would be when university faculty are handed funding and protocols to complete but have not provided input toward the development of such protocols.

Cooperation between industry and universities should be mutually productive and allow for intellectual and scientific input from both

ends. Clearly, survival of the academic physician will largely depend on industry. But industry should remember that its successes have been magnified greatly by advances made within the academic community that resulted while exploring original ideas. Continued support by industry of foundations such as the Foundation for Anesthesia Education and Research seems to be an ideal way to support original research ideas in academic anesthesia. Little will motivate a researcher as much as allowing individuals to create original ideas and then giving them the opportunity to develop these ideas.

Christopher J. Peterson, M.D.

Assistant Professor

Department of Anesthesia

The Pennsylvania State University College of Medicine

P.O. Box 850

Hershey, Pennsylvania 17033

Reference

1. Saidman LJ: Unresolved issues relating to peer review, industry support of research, and conflict of interest. ANESTHESIOLOGY 80:491-492, 1994

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Motivation, Bias, and Scientific Integrity

To the Editor:—The editorial by Saidman¹ discusses important implications of conflict of interest to the criticism of scientific work and to the admissibility of submissions to ANESTHESIOLOGY. Had I written the editorial, I might have approached the problem from a different perspective, one of motivation as well as bias.

As suggested in the editorial, conflict of interest is important because it entails a potential bias that may compromise the scientific objectivity of the influenced person. I agree with the editorial that conflict of interest and motivation come in many guises. As the editorial suggests, the investigator may be motivated by a relationship with a commercial enterprise or by competition from another investigator. However, motivation goes beyond that. We accept, almost without thought, that most investigators have an inevitable bias: they are owners of a hypothesis, a point of view. We accept that investigators are "out to prove a point." We accept that certain results may please technicians and their leaders, and that, furthermore, the jobs of both technician and leader may depend on those results. We accept the fact that the threat of "publish or perish" may motivate inves-

tigators to take shortcuts or to fabricate data, but find it unacceptable if the investigators actually do so.

As the "senior, experienced, and respected investigator" referred to by Saidman, I would like to describe some of the motives underlying the studies^{2,3} that prompted the editorial. First, as the editorial notes, I have been "one of those most responsible for the clinical and laboratory characterization of the pharmacology of desflurane," an anesthetic that in the future may compete with sevoflurane. This parental role imposes a considerable bias, one difficult to warn the unwary reader about and one more dangerous to complete scientific objectivity than my ties to Ohmeda would create. It parallels the bias of the owner of a hypothesis.

My second motivation was that I never want to be found wrong about anything. One of my favorite collaborations was with my friend Eric Wahrenbrock and one California grey whale, in which we studied uptake of inhaled anesthetics in relation to body size.⁴ No one could repeat or challenge *that* experiment. Unfortunately, an experiment such as the one described in the reports by Gonsowski *et al.*^{2,3} does

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not allow the same security. How did we defend ourselves against our own biases?

Beyond the care brought to bear on study construction, execution, and analysis, we sought the expertise of several critics both before and after completion of the investigations. The helpfulness of some of these critics was acknowledged in the paper. We adopted most of the suggestions advocated by ANESTHESIOLOGY's reviewers, gleefully refuting a few. Perhaps most important, we sought the advice of those who had a paternal interest in sevoflurane, one similar to our own interest in desflurane. We invited senior researchers investigating the properties of sevoflurane to critique the manuscripts. We also asked the commercial parties responsible for the development of sevoflurane to examine both the manuscripts and our data. Several representatives from Abbott Laboratories came to our laboratory, reviewed manuscripts and data, peered through microscopes, and offered suggestions for changes and further experiments. I believe that we complied with *all* their suggestions (including those for further experiments) and that the final product was the better for their help. We offered coauthorship on our papers, but they gracefully declined.

I believe that the important issues pertaining to our commercial *versus* research interests in desflurane relate more to motivation and bias than to conflict of interest. Motivation and bias are vital to the scientific enterprise; life would be dull without them. We can use motivation to animate and give pleasure to our work. We must prevent bias from compromising that work.

Edmond I. Eger II, M.D.
Professor and Vice Chairman for Research
Department of Anesthesia
University of California
Box 0464, Sciences-455
513 Parnassus Avenue
San Francisco, California 94143-0464

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In Reply:—I could not agree more with Peterson, who expresses concern that young, academic anesthesiologists may be seduced by the promise of easy money and other perquisites into performing studies that have little clinical interest or intrinsic scientific value. At the same time, new drugs must be tested properly in humans. Therefore, what I recommend is that the sponsor and the investigator design the study to satisfy the needs of both, *i.e.*, address questions that allow the investigator to mature as a scientist and that allow the sponsor to obtain information of value to agencies demanding such data.

Similarly, I take little issue with Eger's letter. He elegantly details and defends the process by which the studies^{1,2} that comprised the subject of my editorial were conceived and performed. Clearly, publication of these papers reflects the Editorial Board's conviction that scientific validity of these papers was not questioned. Still, appearances are important and I reiterate my comment, "Surely, there are well regarded toxicology laboratories that might have carried out these studies equally well . . ."³

In the end, had others performed these studies, it is likely that just what Eger desired—to be right—would have been demonstrated,

but without the conflict-of-interest issue being raised, which, in the minds of some, have made him less right than he otherwise might have been.

Lawrence J. Saidman, M.D.
Editor in Chief

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