Once again, we’re told, the pharmaceutical industry is trying to pull the wool over the eyes of Americans. This time the deceit is ghost writing, the practice by which someone other than the named author writes a clinical trial or scientific review article. The purported scandal is that ghost writing activities are supported financially by industry. As an April 15 Washington Post headline proclaimed, "Key Vioxx Research Was Written by Merck, Documents Allege."

This "manipulation of the literature," one of the critical studies argued, undermines the quality of the peer-reviewed literature, creates financial conflicts of interest, and replaces scientific objectivity with the "relentless promotion of commercial interests." Sounds ominous. But the truth is far more complicated, and the editors of the journal that published the critiques -- the prestigious *Journal of the American Medical Association* (JAMA) -- should know it.

### Misleading Reporting Alleged

What exactly did Merck do? According to the April 16 and April 23/30 issues of JAMA, Merck employees and contract agents wrote Vioxx clinical trial and drug review papers, which were then attributed to distinguished investigators at prestigious academic medical centers who did not always acknowledge corporate financial support. The JAMA authors analyzed some 250 internal Merck documents, which were obtained during Vioxx litigation. They reported that Merck employees developed an entire publication plan for Vioxx and contracted with medical publishing companies to write papers and recruit authors with university affiliations. The doctors received nominal compensation in the form of "honoraria." (These grants typically amounted to less than $5,000.) In some cases, Merck scientists themselves were the ghosts. In the end, 92% of the clinical trials papers disclosed Merck’s financial interest, whereas only half of the review papers acknowledged the company’s support.

"This case-study review of industry documents related to Vioxx demonstrates that Merck used a systematic strategy to facilitate the publication of guest authored and ghost written medical literature," the JAMA authors wrote. "We are hopeful our findings encourage discussion of ways to improve the integrity of research."
A week later, JAMA published a second article, which suggested that ghost management of the literature by medical education and communications companies is particularly dangerous when "off-label" or unapproved uses of prescription medications are discussed. The JAMA authors asserted that communication about potential new indications for older drugs is mere promotion and inherently misleading. The standard peer-review process, they suggested, is unable to separate the scientific wheat from the commercial chaff; therefore, the public would be better served by requiring drug manufacturers to prepare costly and time-consuming supplementary new drug applications to the Food and Drug Administration before talking with physicians.

Appropriate Management

Let's stop and take a deep breath. Should one be surprised that companies such as Merck, which are, after all, in the business of selling products that help prevent illness and treat disease, take a keen interest in the scientific publications that explain whether and how those products work? A disinterested observer would expect Merck to develop a "systematic [publication] strategy" for their products, manage submission of those papers to medical journals, and even take a hand in the composition of those manuscripts, if only to ensure that those drugs are properly prescribed. After all, who knows a medicine better than the scientists who designed, developed, and tested it, a process that takes from ten to fifteen years and costs more than $800 million, according to the Tufts University Center for the Study of Drug Development? Contrary to the JAMA authors, I believe that the public is well served by industry involvement in the publication process. Without it, much important scientific data would never be published.

Implicit in anti-ghosting criticism in this case is the allegation that the physicians whose names appear on the published clinical trials reports and reviews did no work. Two of those authors, contacted by the New York Times, argued that they were actively involved in the research and made substantial contributions to the final product. One of them, Dr. Steven Ferris, a psychiatrist at New York University, told the Times that the authors of the first JAMA article never contacted him and appeared to do little research other than to mine the Merck documents.

Following the Rules

More important, so-called ghost management and guest authorship practices are not evidence of Big Phama misconduct. Rather, such tools are perfectly appropriate so long as standard ethical guidelines are followed. Indeed, the International Committee of Medical Journal Editors (ICJME), which includes representatives from leading publications, including the New England Journal of Medicine, the British Medical Journal, The Lancet, and, yes, JAMA, have established Uniform Requirements for Manuscripts Submitted to Biomedical Journals.

In developing these requirements -- which the editorial boards of the vast majority of journals around the world have adopted -- the Committee acknowledged the financial and social realities of contemporary academic medicine. Pharmaceutical companies sponsor most of the drug studies conducted in the U.S., whereas government spending -- funneled through the National Institutes of Health -- is largely used to support basic medical and biological research. Preparing original research manuscripts and review articles is a time-consuming enterprise, and overstretched physician investigators in academic medicine rarely have the time to compose these papers
without editorial assistance. Sometimes research fellows are available for the job, but often the only source of available support is industry. The ICJME recognizes that “ghost management” is common and not inherently biased. What is necessary is absolute transparency in reporting all sources of financial and editorial assistance.

In this regard, the Merck record is mixed. More than 90% of the Vioxx clinical research studies noted the company’s support -- not perfect but close the mark. However, only half of the reviews contained the proper disclosure. Merck clearly needs to do better in the future. Although a third JAMA paper claimed that the company may also have covered up some mortality data, Merck vigorously disputes the charge.

To its credit, JAMA does report that most of the authors of these critical papers have potential conflicts of their own, having served as paid consultants for the plaintiffs in the Vioxx trials. However, the reader needs to look hard for these disclosures, as they are noted at the end of each paper in very small type.

**Physicians Speak Their Minds**

I have worked closely with the pharmaceutical industry as a consultant for the past twenty years in medical education and professional communication. Never have I seen a physician merely slap his name on something a science writer has drafted. The more common practice is for close collaboration between science writer and investigator, from the outline phase through the initial draft to the final manuscript. Edits and revisions often are substantial. Keep in mind that in most cases, the investigators themselves have conducted the drug research in question. They know a medication’s strengths and weaknesses and are not shy about the emphasizing the latter. The notion that a distinguished research physician would compromise his hard-earned reputation and standing for a few thousand dollars worth of honorarium is simply laughable.

Truth be told, these advisors are far more likely to instruct pharmaceutical company executives about which studies to conduct and which claims can be supported than the converse. And industry welcomes that advice -- no company wants to be at the receiving end of a plaintiff’s lawsuit or a warning letter from the FDA. The potential financial costs, reputational damage, and loss of good will can be devastating. I have heard those conversations too many times for them to be coincidental. Contrary to conventional wisdom, it is the doctors who call the shots, not the drug companies.

To be sure, there are many potential conflicts of interest that can influence scientific research. Money is but one of them. The ICJME is correct to demand absolute transparency in reporting all potential conflicts, and all parties involved in the development of medical literature must insist that all ethical guidelines, including fair balance, are heeded. Ghost management need not be inherently manipulative. The process may even help facilitate the timely publication of life-saving information, data that doctors and patients are naturally anxious to have. On balance, the benefits of ghosting appear to far outweigh the risks. Not all ghosts are malevolent.

*Steven Marks is a science writer whose name will appear quite openly on the American Council on Science and Health’s upcoming report on Obesity and New Pharmaceutical Approaches.*
See also: ACSH's report on *Scrutinizing Industry-Funded Science* [1].