

## Conflict of interest revisited

As the number of academic biologists with ties to business increases, the pool of independent scientists for service on advisory boards and peer review panels is dwindling. Will it eventually disappear?

THE biomedical enterprise in the United States is uniquely dependent on the independence of its academic scientists. The National Institutes of Health (NIH) depend on university scientists for the peer review panels (known as study sections) which sit in judgement on the thousands of grant applications considered each year. The National Academy of Sciences (NAS) depends on the expert opinion of academic researchers who serve on its study boards and panels. The Food and Drug Administration needs the advice of independent counsellors for decisions ranging from the safety of silicone breast implants to the effectiveness of new classes of drugs such as cytokines.

Although review panels of various kinds often include representatives from industry or special interest groups, academic scientists have been the backbone of the massive advisory system in the United States, as they have elsewhere. Whether that will continue to be true is in doubt as more and more prominent biomedical scientists forge ties with the business world. Two decades ago, before the recombinant DNA revolution, the good guys were not in science for the money.

This laudable position was the norm as long as the opportunities for biomedical scientists to make money in industry were few and far between. It is easy to resist a temptation that is not there. It is by now old news that the rapid growth of the biotechnology industry has changed all that. As we note in this week's News pages (page 753), the NAS has had to establish a new advisory category (called liaison) for people whose expert advice carries with it the burden of a financial conflict of interest.

The conflict-of-interest debate, which requires urgent resolution if the public and Congress are not to lose confidence in academic science, is going to be quite difficult to resolve because two equally important social values are put in opposition to each other. On the one hand is the familiar expectation that scientists who offer advice on matters of public policy do so without an eye to personal gain. The other imperative is that the fruits of basic research, supported as it is by the taxpayers' money, should be promptly transferred to the marketplace and the bedside.

The importance of technology transfer to the public interest and the US economy (under the buzzword of international competitiveness) was not long ago spelled out in law. The little-read but nonetheless significant Technology Transfer Act requires federal scientists to seek patents on applicable discoveries and encouraged

researchers at NIH and other government laboratories to find ways of collaborating with colleagues in private companies. Thus, at the NIH, there is a proliferation of CRADAs (cooperative research and development agreement) that bring industry scientists to NIH laboratories and vice versa. The rules governing the ethical boundaries of CRADAs (from which NIH scientists make no personal money) are so elaborate that, sooner or later, someone is going to be in violation and a scandal will erupt.

What is the solution? There is no chance of going back to the days when biologists (unlike their colleagues in physics and engineering) lived in an ivory tower. There has not been much fuss in the hard sciences over conflict of interest resulting from collaborating with industry, but that may be attributed to history rather than fundamental differences in the relationships. So, is it likely that conflict-of-interest can be accepted in the biomedical enterprise? No. Even though many scientists now have ties to the profit-making sector, few are entirely comfortable with their new status. The culture has not yet changed entirely. Would full disclosure of business interests do the trick? Not altogether if the NAS's 'liaison' category is any indication.

Perhaps the nature of advisory bodies will have to change. It is common to ask the most prominent (and senior) members of the community to serve. Will boards now seek members from the ranks of younger scientists? Will the market eventually provide a solution? If there is a scarcity of able people free to serve on public boards, those that survive may have to be paid for their services, perhaps handsomely. And boards may scrape by with fewer members (not necessarily disastrously). But the long-run problem is a problem not for those who serve on public boards, but for the academic institutions from which they come. The universities' duty to the prosperity of the community in which they are embedded, may seem to have shifted to the enrichment of their researchers. Can that go on?

Ever since academic biologists took their first tentative steps toward industry in the late 1970s and early 1980s, when companies such as Hoechst, DuPont, and Monsanto were contributing millions of dollars to university collaborations, the research community has worried about its academic soul. There is no easy way out of the present dilemma, which will only get worse during coming years. It is an issue that could well tear the community apart. □