

## COMMENTARY

## SEIZE THE DAIS

by Bernard Dixon

We're becoming very worried about the public's antagonistic attitude towards biotechnology," the head of a U.K.-based company told me recently. "It's getting so bad that we might have to abandon certain areas of research altogether," added another. Throughout Europe these days, one tends to hear sentiments of this sort whenever two or three biotechnologists are gathered together to mull over their trade. No doubt such anxieties will be given energetic airings at two imminent meetings—Amsterdam Biotechnology '90, which opens in that city on June 25; and the 5th European Congress on Biotechnology, starting in Copenhagen on July 8. More worried huddles at the bar.

What is fast becoming the prevailing belief was enunciated particularly clearly by Hans-Peter Sigg, vice president of Sandoz, when he spoke in London earlier this year at a conference organised by the *Financial Times*. The pharmaceutical industry in Europe was likely to fall behind that of competitors such as Japan and the U.S. in harnessing biotechnology, Sigg said, because of "widespread public hostility" to this new discipline. Calling for better public understanding, he complained that many people were showing "an emotional response" to the principles and techniques involved.

I see the situation rather differently: In my view, little or no evidence of real public antipathy towards biotechnology exists. There is, however, ample evidence of skillful and increasingly professional lobbying by activist groups in certain countries, and these two facts together indicate a major opportunity and an urgent need for the biotechnology world to adopt positive measures to explain the true nature of its work to the widest possible audience.

There is a problem, in other words, but those on the wrong side of it are making the wrong diagnosis. We must take the initiative not only in expounding the medical, agricultural, and environmental benefits of applied bioscience, but also in discussing openly whatever possible dangers are raised by critics. We should follow the lead of U.S. researchers who, sensitized by the Luddite-like attacks of Jeremy Rifkin, are discovering that frank discussions with the public and with the legislators actively concerned about how to regulate the products of biotechnology go a long way toward diffusing their critics' arguments. And as important, this would help minimize the perception of intellectual arrogance. Such a strategy would be infinitely preferable to the present style of the scientific community in Europe—that of waiting to respond to robustly expressed criticism, and then doing so from a position of apparent weakness.

I suspect that a straightforward study of this question in Europe, without "loaded" questions, would reveal a picture very similar to that indicated in the U.S. by the Office of Technology Assessment's 1987 survey. It showed a generally favourable stance towards biotechnology among the U.S. public, with a majority of respondents going so far as to affirm that the risks of genetic engineering had been greatly exaggerated and that unjustified fears had seriously impeded the development of valuable new therapies. We should avoid talking ourselves into a paranoid

belief that the public at large is inherently antipathetic to biotechnology as a body of theory and practice. It is simply not true.

In Europe, hard evidence is difficult to come by, but what does exist falls far short of revealing universal biophobia. Although not devoted specifically to biotechnology, a 1979 study by the Commission of the European Communities on public attitudes towards science and technology showed a wide range of views on related topics. About a third of participants, for example, thought that genetic research was worthwhile, and about a third considered that such work involved unacceptable risks. Nineteen percent found it "of no particular interest" and there were 13 percent of "don't knows." But there were many pointed variations between one country and another. As Mark Cantley has pointed out (*Swiss Biotech* 5:5, 1987), 61 percent of Danish respondents found genetic research unacceptable, as compared with only 22 percent in Italy, where widespread awareness of thalassaemia and other haemoglobinopathies prevalent in the Mediterranean countries may have affected peoples' attitudes towards means of prevention or amelioration.

High regard for scientists and high expectations that science will lead to further improvements in health care and well-being were certainly evident in a large study conducted among teenage readers of the French magazine *Okapi*, the results of which were reported by Goéry Delacôte during a Ciba Foundation Conference in London a few years ago. Particularly interesting was the children's judgment on scientists themselves. They were seen as "men of action more often than dreamers (48 percent versus 16 percent) and as benefactors of humanity (64 percent), not egotists working for their own pleasure (3 percent)." For most of the respondents, scientific research had moral and humanitarian connotations.

Delacôte's findings and those of other participants, as reflected in *Communicating Science to the Public* (David Evered and Maeve O'Connor, eds. 1987. John Wiley & Sons, New York), indicate that a simplistic division between pro- and anti-factions, which may be appropriate in sport or politics, is quite inappropriate in fields such as bioscience and biotechnology. Far more realistic is the likelihood that many people entertain two different types of thought at one and the same time. They welcome the countless practical benefits that have come, and continue to come, from science and technology—and for that reason they tend to endorse the scientific enterprise. But they also have understandable concerns about changes being wrought by science, not least because they have heard again and again sinister assertions that scientists are "playing God," "going too quickly," and "interfering with Nature."

The lesson is clear: biotechnologists should be taking the initiative. Monsanto and the Dutch government have already provided experimental evidence that high-quality educational materials can inform and reassure the public and encourage open discussion. Let's begin to harness latent public confidence, rather than wringing our hands over non-existent public hostility.