

/CORRESPONDENCE

HOW SAFE IS SAFE ENOUGH?

To the editor:

BioTechnology's editorials are always a pleasure to read, even when I disagree with them.

It was great to see you take on the homo-germophobics in the recent analogy between AIDS and biotechnology (August '86), and I certainly agree that a demand for "100 percent safety" in the environmental testing of engineered organisms is statistical nonsense. But I cannot agree that the corporation's or the scientist's "right" to test novel organisms freely until and unless proven hazardous is in any sense on a par with the right of individuals to exercise their civil rights until and unless proven hazardous to others. The costly consequences of technology's past mistakes testify against an *a priori* presumption of ecological innocence for any of its creations.

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CONCERTATION CONCERNS

To the editor:

While appreciating the attention paid by *BioTechnology* to European Economic Community (EEC) initiatives ("Upgrading Biotechnology Action in Europe," March '86, p. 175), I should be grateful if you could update and correct some of the statements in Bernard Dixon's article.

A key decision by the Council of Ministers on March 25 has finally approved new price regimes for sugar and starch for industrial use, a move long urged by the Commission, and welcomed by industry. Preparatory work on regulatory and patent issues is now well-advanced within the Commission, and includes consultation with industry and Member State officials.

The new research program in biotechnology is now being launched, as you report. The major organizing role is being undertaken by our Genetics and Biotechnology Division, under Dr. Dreux de Nettancourt. The new Biotechnology Action Programme (BAP, 1985-89) continues some elements of the Biomolecular

Engineering Programme (BEP, 1982-86) just ending, building on its successes in areas relevant to agriculture and food, and expanding to include new topics of wider industrial relevance, although still at a pre-competitive level. Risk assessment research is also included.

However, it does not help the support and coordination work of CUBE (our Concertation Unit for Biotechnology in Europe) to overstate its role, which concerns strategic assessment, information provision, and support for inter-service cooperation among all areas concerned with biotechnology. CUBE's role is not "orchestrating the BAP" as Dr. Dixon states, although there is naturally close collaboration with the research program.

Though responsible both for CUBE and for the Directorate F, which includes biotechnology research, I am conscious of wearing two hats; if you wish to employ musical metaphors about concertation within the Commission or with Member State administrations, I would suggest a jazz band rather than a symphony orchestra.

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LIGNINASE CREDIT

To the editor:

Bernard Dixon's Commentary in the May 1986 issue revolves largely around problems caused to scientists when they succumb or do not succumb to "biotechnology hype." He uses as an example John Palmer, professor of plant biochemistry at Imperial College London.

I cannot complain about Dixon's reasonable discussion of funding problems that may result for scientists when they do or do not succumb to the lure of excessive flamboyance. However, I do ask that examples used be historically accurate. In Dixon's Commentary, this is not the case.

Dixon states that John Palmer and his colleagues largely answered the knotty question "of how does lignin's

chaotically random structure succumb to enzymatic attack." This "answer" refers to the discovery that ligninase initiates degradation of lignin model compounds by removing an electron to create a reactive, ring-centered cation radical. Dixon cites a paper in *FEBS Letters* by Palmer's group that presumably provided the elusive answer.

I do not wish to slight the important contributions made by Palmer and his colleagues. However, Palmer et al. were not the first to describe the mechanism by which ligninase operates. This discovery was reported first from Kent Kirk's laboratory at the USDA Forest Products Laboratory (Madison, WI). Palmer's paper in *FEBS Letters* was submitted in February 1985 and published in April 1985. In that paper the authors suggest that cation radicals are formed, but provide no direct evidence (this was a "Discussion Letter"). Kersten, et al. (*J. Biol. Chem.* **260**: 2609-2612) published *proof* that cation radicals are produced by ligninase and suggested that the various reactions catalyzed by ligninase involve cation radical intermediates. The paper of Kersten, et al. was submitted in November 1984 and published in March 1985. To give Palmer, et al. all the credit is inappropriate considering that the initial hard work and manuscript were produced from Kirk's group.

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ERRATUM

In the article on algaculture that appeared in the November '86 issue, two photo credits were inadvertently transposed (although the photo captions were correct). The *Haematococcus* on page 948 actually came courtesy of Microbio Resources; the aerial view of Cyanotech's ponds on page 951 came, naturally enough, from Cyanotech.