

## /THE LAST WORD

# Release and Regulations

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*As part of our ongoing tenth anniversary celebration, we present a sampler of quotes from our back issues.*

"Any critical extraterrestrial monitoring our affairs would surely be astonished by the contrast between intense, recent concern over manipulations conducted under conditions of cast-iron containment, and the manifold ways in which we have modified terrestrial genomes during centuries past. . . . Consider, for example, the monoculture of astronomical areas of genetically identical plants which characterise modern agriculture. Think of the proliferation of heavy metal resistance species caused by the dumping of mining wastes on the earth's surface, and other toxic materials in the environment. Above all, there is the appalling spread of bacterial drug resistance produced by uncontrolled, indiscriminate use of antibiotics."

*Bernard Dixon, on the post-Asilomar fuss over recombinant DNA. Bio/Technology, "Commentary," May 1983.*

"In short, such a regulatory body should do just about everything but find us a good five cent cigar."

*Henry I. Miller, of the FDA (Rockville, MD) on the report of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioural Research which recommended the formation of a new body to regulate and promulgate standards and objectives in gene therapy. Bio/Technology, "Final Word," June 1983.*

". . . factual errors in what was otherwise an absurd presentation."

*Henry Miller, FDA, on Jeremy Rifkin's presentation to the Recombinant DNA Advisory Committee proposing an outright ban on the transfer of any genetic trait from one mammalian species to the germline of any other mammalian species, with a particular prohibition of such gene transfer involving humans. [Rifkin's proposal would prohibit human reproduction, unless the means of transfer were better defined.] Bio/Technology, December 1984.*

"There are some people who just cannot be approached in a rational fashion. They don't want to have answers, they really don't. They just want to ask questions, and they want to be afraid. They really have not been receptive to anything that's been told them. At that point what can you do?"

*Stephen Lindow (University of California, Berkeley), originator of research on *Pseudomonas syringae* which lead to the "Ice Minus" strains (Frosban) used by Advanced Genetic Sciences (Oakland, CA). Bio/Technology, June 1987.*

"It's time to stop straining gnats. Let's get us a case we can get our teeth into."

*Non-insectivore RAC member, L. Albert Daloz, expressing some frustration at the institution on September 23, 1985 over NIH/RAC's "Points to Consider in the Design and Submission of Human Somatic Cell Gene Therapy Protocols" being released well in advance of any experimental protocols being submitted. The first protocol only came in July 1990. Bio/Technology, November 1985.*

"The Congress is receptive and ready to act."

*Patrick J. Leahy, Democratic Senator from Vermont, on the need for an American strategic and long-term agenda for the future of biotechnology. Bio/Technology, May 1988.*

"What's really nice is that no one has told me to go out and trash the experiment. But I'm going to do it. Tomorrow its done, tomorrow its over. . . . Every time I see those trees I think about the difficulties they caused the university, the people, the agency, the industry, and the whole country."

*Gary Strobel, a plant pathologist at Montana State University (Bozeman, MT) who injected elm trees infected with Dutch Elm Disease with a preparation of recombinant *Ps. syringae* prior to having received EPA approval for the experiment. Strobel had previously released genetically engineered *Rhizobium meliloti* in South Dakota, Montana, California and Nebraska in 1983 and 1984 before the development of the 1986 regulations. Bio/Technology, October 1988.*

"A belief that any given gene exchange demonstrable in the laboratory is commonplace in nature is a hypothesis. . . and should not be the cornerstone of regulatory policy."

*The Ecological Society of America (Washington, DC) report "The Planned Introduction of Genetically Engineered Organisms: Ecological Considerations and Recommendations." Bio/Technology, April 1989.*

"Envirocrats, pigs, morins, and agriprots."

*Mark Cantley of CUBE (Concertation Unit for Biotechnology in Europe; Brussels) categorizing anti-biotechnologists. Envirocrats is self-explanatory; "pigs" are "public interest groups;" "morins" claim "more research is needed;" while agriprots are (to put it inelegantly) defenders of socioeconomic structures against innovation and international competition. Bio/Technology, December 1990.*

"If the average jock could afford hGH, he'd pass up anabolic steroids."

*Dan Leggett, compliance officer at FDA. Bio/Technology, November 1991.*