Although IL-12, as described by Hall, appears to be one of the most promising of all cytokines, I regard the results obtained so far with guarded optimism.

The studies on IL-12 are still relatively few, as revealed by a quick database search. Considering the potential harmful effects noted by Hall (symptoms resembling toxic shock, atherosclerotic plaques, and aggravation of other ailments), thorough laboratory studies should be conducted before clinical trials begin.

Most of the studies to date have been about the ability of IL-12 to switch immune responses from a pathogenic to a protective type by modulating the development of T cell phenotype. However, IL-12 is apparently unable to induce these changes in the absence of endogenously produced interferon gamma. The adjuvant-like activity of IL-12 is important, but for IL-12 to be useful in vaccination, the repertoire of relevant antigens for the diseases in question needs to be identified. Also, the antigens considered protective in the developed world may not be protective in developing countries; the tuberculosis vaccine is an example of variations in effectiveness from country to country.

Treatment of clinical disease, which will require the modulation of an ongoing immune response, is critical to developing an effective therapeutic approach. Few IL-12 studies have addressed this issue.

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Funding Italian Research

In the article "Funding reform fights on against researchers' apathy" (News & Comment, 30 June, p. 1843), Susan Biggin reports the views of several Italian investigators, including myself, on Italy's National Research Council (CNR) and the creation of "national institutes" for the different sciences.

I told Biggin during a short phone interview that I was not updated on the specific plans of the Biotechnology Committee for the national institutes, and because I knew the committee was working on them, I advised her to directly contact its members for more information. My remarks do not justify Biggin's statement that "the biotechnology committee is lagging behind." On the contrary, the Biotechnology Committee has always been active in pressing ahead with innovative proposals.

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Biggin reports about the alleged new trend in the CNR's funding policy. If only this trend were in operation! One example: 1 May 1994 was the deadline for submitting funding proposals. In accordance with CNR's new policy of favoring large consolidated projects rather than the many single ones financed in the past (this latter the so-called "rainfall" funding), researchers were encouraged to propose "coordinated" projects involving several groups. In late June 1995—more than 1 year later—none of the applicants had yet been officially notified of the outcome of their applications. Nonetheless, as is CNR's tradition, progress reports on the previous year's work under the mythical grants "awarded" were requested along with funding proposals for 1996. Finally, single projects were "coordinated" officially by CNR committees: Sev-

eral (five to seven) research groups were gathered together—on the basis of sometimes questionable affinity—and granted a bulk sum to be shared (approximately $6000 per single group, on average). A small number of the actually "coordinated" projects were also funded, but these grants did not exceed and often fell well (50%) below those of the originally single proposals. As is CNR's tradition, these funds will likely be available to research groups in several months.

Government funding policies contrast with those of private funding agencies, including the Italian Association for Cancer Research and the Telethon Foundation, which have been granting adequate funds to highly selected groups for the past several years. For a number of reasons, CNR committees dare not adopt the rigorously selective criteria used in most developed countries. The rising costs of scientific research, an inflation rate of the national currency likely to exceed 5% this year, and its considerable devaluation make international competition extremely difficult for Italian research groups.

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The Cost of Downsizing

In Lewis Carroll's *The Hunting of the Snark* (*1*), the Bellman cries, "I have said it thrice: What I tell you three times is true." John H. Gibbons, the Assistant to the President for Science and Technology, similarly prepares us for an incorrect conclusion in his editorial "The politics of science" (14 July, p. 143) when he asserts that "the spendthrift budgets of the 1980s and early 1990s were unsustainable and mortgaged much of our national future. To pay that inherited mortgage, we have made significant changes in the federal research system by downsizing, restructuring, and deregulating. We will need to do even more."

Downsizing can lead to a diminishment not only of research but also of future business profits, if new scientific ideas are not developed that lead to the industries of the future. Nobody decades ago would have predicted that so much of our economy would involve computers or lasers. Might the Bose-Einstein condensation, recently discovered in a government-supported laboratory (*2*), be the base of future huge industries? Or might new scientific ideas based on observing the Bose-Einstein condensation or other new laboratory developments lead to importantly profitable ventures? We cannot know in advance, but the record shows that basic research can eventually pay off big. Even Michael Faraday was once questioned as to what good this newfangled relation between electricity and magnetism could possibly be. So it seems shortsighted to do "even more" downsizing, and I am sorry to see the President's science adviser calling for it.

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1. L. Carroll, in *The Annotated Snark*, M. Gardner, Ed. (Simon and Schuster, New York, 1962).
2. M. H. Anderson, J. R. Ensher, M. R. Matthews, C. E. Wieman, E. A. Cornell, *Science* **269**, 198 (1995).

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Land for Florida's Fauna

In the news article "Filling in Florida's gaps: Species protection done right" (Frontiers in Biology: Ecology, 21 July, p. 318), Charles C.