previously induced in these cells that can be triggered by specific cell activation. In this respect, a body of evidence has shown that, after stimulation, the secretion of lymphokines (such as IL-2) actually predisposes T cells to apoptosis when there is further antigen receptor stimulation.

Another point discussed by Martin concerns our views on the mechanisms of CD4 cell depletion in AIDS pathogenesis. We are convinced that direct cell killing must contribute to CD4 cell depletion, especially in light of a recent analysis of viral load in lymphoid organs (5). We believe that continuous and profound CD4 cell depletion is the result of multiple mechanisms, as we mentioned in the first paragraph of our Perspective. In addition, we believe that the possible impairment in T cell renewal may contribute, to some extent, to the CD4 cell depletion.

Finally, Martin argues that combinations of antivirals, antibiotics, and anti-apoptotic drugs may interfere with apoptotic cell death in other cell lineages. Actually the goal is not to suppress apoptosis (which might be almost impossible to achieve and might be dangerous in that it could induce autoimmunity and favor cancers), but to reduce apoptosis to a normal rate in lymphocytes of HIV-infected patients. This could be accomplished by acting on the causal agents that lead to apoptosis (virus, microbial factors, free radicals) or during the many steps of the apoptotic process.

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NSF: A New Name?

The ScienceScope item "NSF: What's in a name?" (3 Sept., p. 1263) about the reaction to a proposal by the American Association of Engineering Societies (AAES) to rename the National Science Foundation (NSF) the National Science and Engineering Foundation is not an accurate reflection of the full picture. Many engineering professionals and at least 14 other engineering and technical societies, with more than one million members support this proposal.

In 1985, Congress broadened the NSF Organic Act to provide a statutory emphasis for engineering research and education equivalent to that of science. The name change would highlight this broadened emphasis and would foster greater recognition of the co-equal role that engineering plays with science in the research enterprise. This proposed change seems consistent with the spirit of the report of the National Science Board's Commission on the Future of NSF (*1*), which called for the allocation of NSF's resources with two goals in mind: "support of first-rate research *at many points on the frontiers of knowledge . . .*" (emphasis added) and a "balanced allocation of resources in strategic research areas. . . ."

Changing the name of NSF would not require Congress to redirect the Foundation's mission away from fundamental research. The engineering community vigorously supports the NSF programs that provide grants for fundamental science and engineering research to individual investigators and university research centers as vital to maintaining the research base at academic institutions. The engineering profession is a beneficiary of the results of

scientific discovery and fundamental engineering research, and an unhealthy science enterprise would adversely affect engineering research as well.

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Basic Research and the Cost of Health Care

Christopher Anderson's 23 July article "Research and health care costs" (News & Comment, p. 416) highlights a disturbing idea that is apparently gaining acceptance in some quarters—that investment of public funds in biomedical research may lead to increasing health care costs.

Medical cost containment should not be based on cutting the budget of the National Institutes of Health. Opportunities to contain health care costs are found in clinical practice, not in the laboratory. The cost of using new technology is primarily a function of market economics, not federal research spending. For the pharmaceutical industry, cost-effectiveness of new products is critical. Companies face significant price competition from both generic products and other innovative products with similar mechanisms of action. They also must deal with a changing customer base, as managed care organizations and other major purchasers gain greater negotiating power.

These and other market forces should lead efforts to contain health care costs. Decreasing investment in basic research, while reducing current federal spending, would stifle innovation. Because research is inherently unpredictable, we would never know which therapeutic opportunities had been missed. Scaling back basic research would invariably interfere with our national system for developing better and more cost-effective products.

There will always be debate over priorities in the federal budget about what we, as a nation, should spend on basic biomedical research. Let's keep health care cost containment out of that debate; it simply doesn't belong there.

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Corrections and Clarifications

Figure 4 (p. 997) of the article "The genesis and collapse of third millenium north Mesopotamian civilization" by H. Weiss *et al.* (20 Aug., p. 995) contained some errors. The correct figure appears below.