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COVER

South African cheetah cub (Acinonyx jubatus). The cheetah is the world’s fastest mammal and the most morphologically specialized felid. The modern species appears to be striking in its biochemical genetic uniformity compared to other felids or mammals in general, possibly as a result of a severe population bottleneck or series of bottlenecks in its natural history. The consequences of this genetic monomorphism are readily apparent in captive cheetah, and the species provides a graphic biological example for the adaptive value of accumulated genetic variation in outbred mammalian species. See page 1428. [Jay Golden, Wildlife Safari, Winston, Oregon]
Health, Wealth, and Unhappiness

An Administration reversal of a congressional increase in the National Institutes of Health (NIH) budget has caused great anguish among biological scientists and raises questions, not only about how much money is needed, but about the manner in which it is administered.

An objective measure of how much total funding is needed might be based on the percentage of total sales that hardfisted chemical companies spend on research. That figure is in the 4 to 6 percent range. Although the analogy is not perfect, on such a scale the NIH budget, which is approximately 1.5 percent of the total medical bill of the country, is underfunded. On a subjective basis, the arguments are even more persuasive. There are few conditions of life that the average person would prefer to good health. Those in upper-income brackets can, and do, spend almost any amount of money to be well. Happiness is not defined as “unhealthy, wealthy, and wise.” For the less privileged, good health is even more vital. The salaries of professionals continue when they are ill. The wages of a carpenter do not. He depends on good health to earn his income. Recent studies have indicated that heart disease and other infirmities are more prevalent among the poor. So, in fact, curing disease would be most beneficial to those in low-income categories, even though it is advantageous to all.

On the basis of what is known, a cut in the NIH budget can hardly be justified. It is estimated that by the year 2000 Alzheimer’s disease will be the single most prevalent health problem in the United States. Acquired immune deficiency syndrome (AIDS) is currently doubling in less-than-a-year intervals and spreading into the heterosexual population, a Sword of Damocles of unbelievable proportions. Each AIDS victim dies painfully and expensively; the cost of caring for those who have already contracted AIDS is estimated to be over $400 million in hospital bills alone, to say nothing of the outpatient costs and the emotional trauma. Dramatic as this development may be, the toll of heart disease, strokes, and cancer is even higher.

Biototechnology is still in its infancy, but the “DNA Valleys” of the future may approach the size and importance of the “Silicon Valleys” of today. What is the signal to young scientists thinking about a career in biotechnology if the priorities of the government seem to fluctuate wildly? What is the message to senior investigators who have labored effectively for years if unreasonably high priority standards tell them to labor no more?

This year NIH was operating in good faith on a budget identified at 6500 grants. According to past practice, NIH had allocated one third of its funds. It was then told by the Office of Management and Budget (OMB) that (i) a major share of these funds would not be available this year and (ii) a total of only 5000 grants could be funded, a reduction from previous years. The net result is that certain investigators whose grants happen to come up in the latter part of 1985 will be caught in a competitive situation beyond the control of the individuals managing the programs.

In past crises, NIH assessed all grants in order to distribute the money more fairly, but this year OMB, in the person of the director, has micromanaged, and is telling NIH that it cannot be so flexible. This midcourse decision may be reversed, particularly if Congress has the courage of its convictions. But in the interim great damage will be done. Already investigators with long records of productivity and flattering priority scores have been told they will not be funded for the current year. Disbanding a research team and attempting to regroup it later is not the way in which science progresses. Micromanagers with microseign cause macromesses.

A happy outcome of the present turmoil would be for OMB and Congress to appoint ambassadors to meet on some neutral ground, such as Geneva, and generate a modus operandi that would allow a steady, reliable, and wise funding program. The present battle between branches of government has elements of Shakespearean comedy, but it has too many ingredients of mutally assured destruction of biomedical investigators to be viewed with amusement.—Daniel E. Kosshland, Jr.