January 22, 1999

Joshua Lederberg presentation on bioterrorism defense at the National Academy of Sciences, and introduction of President W. J. Clinton.

(after Sandy Berger's introduction of Dr. Lederberg)

Mr. President, distinguished officers of government, scientific colleagues, ladies & gentlemen:

For over a half-century, I have had the joy and excitement of research on the microbial world: its evolution, the conspiracies it harbors in its ambiguous competition with the human species. There have been many occasions in this very hall to share news of profound scientific discoveries which not only broadened our conceptual understanding of ourselves and our biological extended family, but gave us ever sharper tools to deal with pestilence and decay. But throughout that time, I have been imbued with fear, that, just as happened with physics and chemistry, great advances in medicine would be turned into engines of war.

That fear has been compounded by the deterioration of civil order that might otherwise restrain the use of weapons of mass destruction; and by the ease with which nature already provides the germs of disease that might be used as weapons. In fact, the very triumph of the democratic world's military technology with guided missiles and dominance of the battlefield drives the agents of disorder to more subversive means of attack and inspires new scales of terrorism grand and small. We have made great progress diplomatically and in international law with the prohibitions against biological and chemical weapons -- though there is some way to go in their enforcement. However our civilian populations have until now been almost undefended against bioterrorism -- in an era when political disorder weakens the system of deterrence that had been our main shield thoughout the Cold War.

The reconstruction of bio-defenses must be regarded as a branch of public health, and it is equally necessary to deal with cyclic renewals of historic natural plagues, as much as with those borne of malice.

So it has been extremely gratifying that, during the past year these concerns -- voiced so persuasively by many of my colleagues here at the Academy and the Institute of Medicine -- have reached the attention of the highest levels of government, and action plans have been embodied in several executive orders and in the budgetary proposals the President will discuss this morning.