Glenn

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August 20, 1989

Senator John Glenn
Chairman, US Senate Committee
on Governmental Affairs
Washington, D.C. 20510-6250

Dear Senator Glenn:

In response to your letter of June 23, I have prepared answers to the questions therein, as follows:

1. Question: Do you believe that with the introduction of the new genetic technologies, the use of biological agents for hostile purposes is more likely than it was 10 years ago?

Answer: No. I do not believe that innovation in genetic technology will determine whether or not biological agents are used for hostile purposes.

With the advent of genetic engineering, there has been uninformed talk of "designer agents" for use in weapons. But, in terms of the specific physical, chemical, physiological and other properties that qualify an agent for battlefield use, no one has realistically spelled out how such agents would be operationally superior to already known infectious agents for strategic use or to existing chemical warfare agents for use on the battlefield.

I believe that it is not technological innovation in genetics, but political factors that are likely to determine whether biological weapons are used.

2. Question: Why do you think countries that have tried to obtain, or use, chemical weapons are also more likely to acquire and use biological weapons? Aren't the two classes of agent different in terms of their predictability and controllability?

Answer: Biological weapons might be considered by a non-nuclear nation seeking strategic weapons for deterrence or for a "war of the cities", as begun in the Gulf War. In such cases, previous acquisition or use of chemical weapons could, in some cases, facilitate a decision to acquire biological weapons for a number of technical and political reasons. On the technical side, there are similarities between chemical and biological weapons in the concepts and in the equipment for their long-range delivery. For that reason anti-city biological warfare could occur as an escalation of or alternative to anti-city chemical warfare.

3. Question: What portions of the Biological Defense Research Program do you believe should reside within the military infrastructure and which portions of the research could be conducted under the auspices of the civilian biomedical community?

Answer: As a general rule, the needs that are of importance to the military and are inadequately dealt with by the civilian sector should be addressed within the military infrastructure. This would include, for example, research on infectious diseases endemic in regions of the world where US personnel are based but which are not adequately studied in the civilian sector.

In order to maintain and enhance the credibility and utility of the categorical US renunciation of biological and toxin weapons, military research in this area should be limited to the development of protective and prophylactic measures, strictly defined, and should be done without secrecy.

If additional assurance and accountability are desired, that could be provided by a number of measures which would not interfere with important and legitimate research activities. One such measure would be to include representatives of the Public Health Service and/or the National Institutes of Health on the higher-level committees that periodically review military biological research programs and to require from them an annual statement that only protective and prophylactic research is being conducted. Another measure would be to draw all biological safety officers in the US Government from a special corps of technically trained individuals under the Public Health Service. This would be a major departure from present practice and should be studied carefully before deciding upon its merits. The credibility of US policy (and of stated Soviet policy) would also be further increased by expanding the existing program of exchanges with foreign scientists to include exchanges on a reciprocal basis with scientists from the Soviet Union.

4. Question: What is the uniquely military function of the biomedical portion of the Biological Defense Program? Do you feel that a civilian agency would be incapable of achieving this mission in lieu of the military?

Answer: As described above, one such function is research on infectious diseases endemic in regions of the world where US personnel are based but which are not adequately studied in the civilian sector. Another unique function is to receive and evaluate information from the intelligence community about biological weapons threats, if any, that might justify research on special protective and prophylactic measures. Because of unavoidable limitations on the reliability and specificity of intelligence reports and on the utility of biological defense, at least for civilians, it is to be hoped that a more effective approach will become available for evaluating suspicious biological activities abroad and for deterring or terminating activities prohibited by the Biological Weapons Convention of 1972. Such an approach would be the strengthening of the Convention to include verification procedures, particularly mandatory challenge inspection. If that should come about, it would be appropriate to review the Biological Defense Program to redefine its mission, possibly adding functions

in support of verification activities and expanded programs of international exchange and cooperation.

5. Question. Do you favor an annual listing of the biological agents being investigated by the biomedical research program of the BDRP?

Answer: I favor the open publication of an annual summary of each research project, including the names of organisms actually worked with. No separate list would be needed.

6. Question. In your testimony, you suggested that the intelligence community may need to revise previously confirmed assessments in the area of chemical and biological weapons. To what assessments were you referring?

Answer. I was referring primarily to the assessment that the Soviet Union and its allies employed trichothecene mycotoxin weapons in Southeast Asia and Afghanistan. The evidence presented by the US to support this assessment has been discredited, in part by studies conducted by agencies of the US government itself and also by competent investigators in allied countries. Nevertheless, the assessment continues to be repeated, with no serious attempt to take account of the new information. Such lack of accountability runs counter to the vital mission of the intelligence community in providing accurate information to the President and other officers of the US government. A thorough and objective review of all the evidence is called for. This should be structured so as to be unprejudiced by the understandable reluctance of intelligence and political authorities to revise a highly publicized previous conclusion.

7. Question. Please offer any comments you may have upon the testimony of other witnesses at the hearing.

Answer. In my opinion the principal witnesses from the Departments of State and Defense and from the US Army Medical Research Institute for Infectious Diseases presented testimony indicating sound policies of support for the principles and objectives of the Biological and Toxin Weapons Convention and for the principle of openness in biological research.

With regard to question number 6, it may be useful to the Committee to have for publication in the hearing record the enclosed copy of the article "Yellow Rain: The Story Collapses" from the Fall 1987 issue of Foreign Policy.

Respectfully,

Matthew Meselson

Matthew Meselson
Professor of Biochemistry