

Scientist Support for Biological Weapons Controls

The terrorist attacks of the past few years have made us all more aware that the threat from biological weapons needs to be tackled urgently and on many fronts. International agreements such as the 1972 Biological and Toxin Weapons Convention (BWC) are one vital component. The next meeting of the BWC signatories will take place this month in Geneva, from 11 to 22 November. The last meeting, in December 2001, did not reach agreement; the next formal treaty review conference is scheduled for 2006. This month's meeting reminds us that our nations' best scientists must support policy-makers in their efforts to make progress toward measures that will counteract the threat from advances in weapons technology that could be misused by governments or as terrorist threat agents; we must also devote attention to blocking the proliferation of biological weapons capabilities around the world.

Collectively, the scientific community can provide a range of tools that reduce the threat from biological weapons. In the wake of 11 September 2001, major increases in funding are becoming available for research on improved vaccines, antivirals, and antibiotics, as well as for new detection methods. We also need an increased understanding of the spread of potential agents. The expertise required to achieve these important goals is spread across many scientific disciplines, and it will require newly intensified efforts in academia, industry, and government research facilities.

The increased funding for this research has been accompanied by a debate about the level of security restrictions that should be placed on it. We recognize the difficulties inherent in achieving an appropriate balance between scientific openness, which is crucial for scientific progress, and the restriction on public information needed to safeguard security. However, clear distinctions must be made between classified and unclassified research. Poorly defined third categories of "sensitive but unclassified information" that do not provide precise guidance on what information should be restricted from public access, as currently being debated in the United States, generate deep uncertainties among both scientists and the officials responsible for enforcing regulations. Experience shows that this makes the best scientists reluctant to work in the affected area, stifles creativity in fields where it is most needed for defensive purposes, and consequently weakens national and international security.

In defining clear boundaries between what is classified and unclassified, governments must have access to the best scientists in each field. Advice is needed on which current research should be classified and on how such a classification system can evolve to reflect scientific advances. The National Academy of Sciences and the Royal Society are willing to contribute their expertise as they have done previously in other areas. Cutting-edge science is truly international, and to be effective, the regulations that define classified material related to research will need to be harmonized across national borders. This is another area where our two academies are well placed to contribute.

Individual scientists also have a key role to play. Every researcher, whether in academia, in government research facilities, or in industry, needs to be aware of the potential unintended consequences of their own and their colleagues' research. In 1975, scientists agreed to the "Asilomar moratorium," which gave guidance to researchers in the emerging field of recombinant DNA research. Today, researchers in the biological sciences again need to take responsibility for helping to prevent the potential misuses of their work, while being careful to preserve the vitality of their disciplines as required to contribute to human welfare.

The meeting in Geneva provides an important reminder for scientists to assist their governments and to become more involved in these critical issues. The threat from biological weapons must be addressed by both the individual and the collective actions of the international scientific community.

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