

Grant Proposal to the W. Alton Jones Foundation

I. The Proposal

This is a proposal for \$59,000 per year for three years to support the first year of a new project of the Committee on International Security and Arms Control (CISAC) of the National Academy of Sciences. The project is to establish an ongoing, biannual dialogue on the problems of biological weapons between a CISAC panel and a counterpart Soviet group of the Soviet Academy of Sciences. A detailed explanation of the project and its budget appears in section III-D of this proposal.

II. Background on the Committee on International Security and Arms Control (CISAC): Objectives and Activities to Date

The Committee on International Security and Arms Control (CISAC) was created in 1980 to bring to bear the scientific and technical talent of the NAS on the problems associated with international security and arms control. Its purpose is to reduce the threat of nuclear war and seek ways to encourage global limitations on the continued development of destabilizing technological weaponry. The committee, which is chaired by Dr. Wolfgang Panofsky (Professor and Director Emeritus of the Stanford Linear Accelerator Center), has a rotating membership of distinguished scientists and experts in the security and arms control area. (See attached Committee list).

The committee's objectives are to study and report on scientific and technical issues germane to international security and arms control; to engage in discussion and joint studies with similar organizations in other countries; to develop recommendations, statements, conclusions and other initiatives for presentation to both public and private audiences; to respond to requests from the executive and legislative branches of the U.S. Government; and to expand the interest of U.S. scientists and engineers in international security and arms control.

The principal current activity of the committee has been a continuing program of private bilateral meetings on issues of international security and arms control with a comparable group representing the Soviet Academy of Sciences. The Soviet delegation, which is headed by Academician E. P. Velikhov (Vice President of the Soviet Academy of Sciences) is also made up of senior scientists and experts in the security and arms control field. There have been seven meetings to date. The first meeting was held in Moscow on June 23-24, 1981, at which time agreement was reached on procedures and a broad agenda for future discussions. The committee met with the Soviet group in Washington on January 11-14, 1982, and in Moscow on September 27-30, 1982. During 1983, the committee held its fourth and fifth meetings with the Soviet group in Washington on March 16-18, 1983, and in Moscow on October 17-20, 1983. A sixth meeting was held in Washington on May 8-11, 1984, and the seventh meeting took place in Moscow on June 4-6, 1985. The next meeting is planned for March 25-27, 1986, in Washington.

All of these joint U.S.-Soviet meetings have dealt in depth with a wide range of security and arms control issues which were addressed in a serious, constructive manner. The June 1985 meeting, for example, included discussions on the stability of strategic forces, the boundaries of the ABM treaty, weapons in space, and biological weapons. The meetings also provided an opportunity for extensive informal exchanges of views among the participants outside the formal meetings. Although these meetings have no official status, appropriate officials of the U.S. Government have been kept fully informed on the plans for and the proceedings of these meetings. In order to encourage frank discussion, it has been agreed that the meetings should be private without communique, joint statements or public reports.

In support of its meetings with the Soviet Academy, the committee has reviewed on a continuing basis security policy, weapons programs, and on-going arms control negotiations. This review has also put the committee collectively, and its members individually, in a better position to advise the executive and legislative branches of government as well as the Academy and its members on related policy issues.

Education of the Academy membership on issues of international security has been an important function of the committee. In connection with the 121st NAS Annual Meeting in 1984 the committee organized a two-day Tutorial on Arms Control and International Security for Academy members. This tutorial, attended by over 200 members of the Academy, covered recent technical developments relating to strategic offensive systems and ballistic missile defense as well as the full range of current nuclear arms control agreements and proposals.

The committee prepared a report on current nuclear arms control agreements and proposals for background reading for the tutorial. This report was expanded into a book, Nuclear Arms Control: Background and Issues, published by the National Academy Press in December 1984. The book has been distributed to NAS members, members of Congress, policymakers and the press. It has been well received by all, including the academic community and the general public.

In connection with the 122nd NAS Meeting in 1985 the committee held a two-day seminar on strategic defense. The seminar built on the previous year's more general tutorial. The seminar covered the history of strategic defense concepts, recent technical and political developments related to strategic defense, Soviet and European attitudes toward strategic defense and the Strategic Defense Initiative. The seminar was comprised of formal presentations, panel discussions and question and answer periods, with emphasis on the technical requirements of strategic defense.

In April 1986, CISAC will co-sponsor a seminar on Crisis Management in the Nuclear Age with the Committee on Contributions of Behavioral and Social Science to the Prevention of Nuclear War.

Over the next year, CISAC plans to initiate two new projects: 1) an expanded dialogue on biological weapons with a counterpart Soviet group and 2) discussions of security questions with a group of European scientists similar to CISAC's continuing program of bilateral meetings with Soviet scientists. A longer range project may be the initiation of a similar exchange with the Chinese.

III. The New Project on Biological Weapons

A. The Problem and Its Importance

Biological weapons are microorganisms which are intended to be used to cause casualties or disease in humans or animals and damage to plants or materiel for military purposes. They are considered to be morally repugnant and extremely dangerous because they are relatively easy and cheap to produce, can cause great damage and human suffering even using small quantities and a very low level of technology, and the spread of their effects can be very difficult to stop or control.

There is in existence a 1972 multilateral Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction. However, this Convention alone does not adequately meet the following concerns:

1) The potential of a technology race in biological weapons being conducted within the legal limits of the BW Convention because it permits research and development; the potential for rapid breakout after research and development had been completed. Although it may be impossible to eradicate this problem due to the necessity of research and development for peaceful and defensive purposes, it may be possible to design confidence building measures which, in the case of the U.S. and the U.S.S.R., would provide greater confidence in the Convention and greater certainty about the activities of the other side.

2) Proliferation: The danger of the spread of biological weapons technology to other countries and terrorist groups; the danger of a shift in the attitude of these third parties that would make the use of biological weapons seem more thinkable and to be of some military or political utility.

3) Terrorism: The danger of clandestine attack with biological weapons and the problem of civilian vulnerability to such an attack.

B. CISAC Activity on this Problem to Date

While CISAC concerns itself primarily with nuclear arms control, its members have a growing interest in the problem of biological weapons. This problem is of special concern to CISAC member Joshua Lederberg, President of Rockefeller University and Nobel Laureate in physiology and medicine for research on the genetics of bacteria.

CISAC succeeded in putting biological weapons on the agenda of its last meeting (June 1985) with its counterpart group from the Soviet Academy of Sciences. Because the topic was new and few of the American and Soviet participants were very knowledgeable on the subject, the exchange took the unusual form of a short tutorial given by Dr. Lederberg. Following the tutorial, the discussion with the Soviets focussed on two issues: 1) an incident in Sverdlovsk in 1979 and the need for adequate exchange of scientific information on this incident to ensure that the clauses on cooperation of the BW convention are being fully complied with and 2) the danger of biological weapons proliferation which both sides agreed should be an area of great concern to both countries, particularly in light of rapid advances in genetic engineering and biotechnology.

Given interest on both sides to continue the dialogue on biological weapons, and recognition that neither group has the level of expertise necessary for fruitful in-depth discussions, it was informally agreed with the Chairman of the Soviet group, Academician E. P. Velikhov, Vice-President of the Academy of Sciences of the U.S.S.R., to set up joint expert panels under CISAC to meet biannually, separately from the CISAC biannual meetings.

Toward this end, CISAC sponsored an ad hoc meeting on October 18, 1985, of experts to discuss the issues and to advise on objectives and means in CISAC's future discussions on biological weapons with the Soviets. This meeting was very successful. The consensus of the outside experts was that this topic is extremely important, that it deserves attention, and that it is not currently receiving much attention on the official level.

Participants in this meeting indicated that the CISAC panel could play a useful role in laying the groundwork for greater confidence on both sides, in raising official concern about the threat of biological weapons proliferation and use by third parties, and in helping to create a constituency among leadership elites on both sides for biological weapons arms control. There was a concern expressed that the problem of biological weapons not be discussed publicly in a way that could encourage the terrorist use of these weapons.

C. Unique Suitability of CISAC for this Project

CISAC is uniquely suited to carry out the project successfully because of the rapport it has established with the Soviets and because of the stature of the individuals on both sides. The regular CISAC bilateral discussions have been successful largely because of the personal relationships that have developed over the years between members of the

two delegations, and because the discussions are private between well respected scientists on both sides. They have succeeded on the whole in being very detailed and serious with a minimum of polemics. While the exchanges are entirely private and unofficial, the status of the individuals on both sides and the informal consultations with policy makers that occurs on both sides means that these two groups are in a position to introduce views and concerns indirectly to policymakers.

It is against this background that a bilateral CISAC panel of new individuals expert on biological weapons is likely to be taken seriously by the Soviets and to be effective in promoting relevant scientific cooperation and raising the level of interest and concern of policymakers on both sides in this issue. Because of the good rapport already established, the Soviets may be less fearful that this is an exercise designed to criticize Soviet activities in this area, which is not its purpose.

D. Project Activity and Budget for one year commencing April 1, 1986.

The anticipated activity for the first year is one bilateral meeting in Moscow in the spring of 1986 and another bilateral meeting in Washington six months later. At least one preparatory meeting of the American delegation (approximately eight people) would be necessary before each bilateral meeting. It is assumed that the activity would be the same for the following two years.

Biological Weapons Project Budget for First Year - April 1, 1986-March 31, 1987

1. Salaries and Wages			
Professional Associate @ 30,000/yr. (10%)	3,000		
Secretary @ 18,500/yr. (10%)	1,850		
Salary Adjustment	<u>120</u>		4,970
2. Fringe Benefits @ 22%			1,090
3. Travel Costs			
<u>Domestic</u>			
- 2 planning meetings for biological weapons conferences - 16 trips @ \$400	6,400		
<u>Joint Meeting with Soviet Counterpart Group</u>			
- <u>Moscow</u>			
8 Americans to USSR @ \$3,000 each	24,000		
- <u>Washington</u>			
8 Soviets @ \$500 each	4,000		
8 Americans @ \$1,000 each	8,000		
			42,400

5. Other Direct Costs		
- Printing	400	
- Copying	250	
- Postage	150	
- Telephone	250	
- Word Processing	150	
- Books & Periodicals	100	
		1,300
6. Program Direction, Management and Space Costs **		
@ 63% of \$6,060		3,820
7. General & Administrative Costs		5,370
Total Estimated Costs		<u>58,950</u>

CISAC's per year operating budget is approximately \$366,200 per year. It is funded by the National Academy of Sciences and other private sources.

Attachments:

NAS's most recent financial statement
 Proof of qualification under (501(c)(3))

Note: The NAS annually utilizes the services of over 7,500 volunteer scientists, engineers, and other professionals in its committee system. Largely drawn from universities and industry, the NRC committees represent over \$18,000,000 in services provided at no cost to sponsors during the performance of studies. Placing the value of these donated services in the overhead base would result in an effective overhead rate of less than half of the current negotiated rate.

*Includes accrual of annual and sick leave, holidays, and other leave such as for jury duty, military service, and special personal leave currently estimated at 18.5% of direct salaries and wages.

**Includes facilities capital cost of money factor of approximately 04.7%.