Center for the Study of Democratic Institutions
THE FUND FOR THE REPUBLIC, INC.
Box 4068, Santa Barbara, California 93103
May 18, 1966

Dr. Matt Meselson
The Biological Laboratories
16 Divinity Street
Cambridge 30, Massachusetts

Dear Matt:

The statement that you sent to me, drafted, I judge, by you and John Edsel*, could, I think, be improved. It is my memory that you told me over the telephone that it had already been endorsed by FAF*, and should perhaps not be changed; but I think that it might be wise to change it.

First, I think that it is too long. It is so long and, in some ways, confusing, that many scientists and physicians might not want to sign it, because of difficulty in understanding it or disagreement with some of the points made. I tried to keep the Bomb-Test petition short and simple. Nevertheless, Edsel*, although he signed it, suggested that the wording be changed. Also, some people such as Bethe, refused to sign it on the grounds that they did not have a personal knowledge justifying some of the statements made.

The goal of the petition, as expressed in the last paragraph, seems to me to be a weak one. I think that the goal expressed by the Pugwash Conference might have greater appeal. Should there not be an effort now to get an international agreement that would cut down on the amount of research and development in this field? In this petition you do not ask that research and development in this field be decreased.

In this petition there are some statements about which I am not sure. They might even cause me to hesitate to sign. The statement that CB weapons are likely to be far cheaper and easier to produce than nuclear weapons is one such.

The opening sentence is weak (wish to warn). I think that the opening sentence might state the purpose of the petition, and that this purpose should be stated again in the last paragraph.

The word "unprecedented" in the fifth line may be justified, but I thank that nuclear weapons are more of a danger to the world now than chemical and biological weapons, and that this petition should not serve to decrease the apprehension about nuclear. Perhaps a positive statement about the dangers of nuclear war should be introduced, together with a statement about the added danger from chemical and biological weapons.

New York office:
136 East 57 Street
New York, N.Y.10022
(212) 753-1340

(continuation of preceding paragraph)

The added danger comes in part from the possibility that a small number of people with rather small resources might manufacture a quantity of these weapons that would be hazardous.

The words "non-lethal" in the third paragraph should perhaps be in quotation marks, if they are used in the petition.

The fourth paragraph seems to me to be appropriate to an article on this subject, but not to a petition. The first two sentences show restraint and understatement. I think that a stronger statement is needed here. In fact, there are, I believe, too many qualifying adjectives and adverbs in the whole petition. For example, in the last sentence of this paragraph the words "so called", "non-lethal", and "likely" should be omitted.

Altogether, I think that the petition should be made shorter, simpler, and more straightforward.

General Rothschild in his book quotes a statement expressing the policy of the United States about sixty-five years ago - the policy not to pledge ourselves to refrain from chemical and biological warfare. Has our policy been changed since then?

Should we not ask the President to stop using any such weapons in Viet Nam? This would be the short-range goal of the petition.

Should we not ask that a treaty be made to stop research and development in this field, perhaps including a pledge by the signatories of the treaty not to use any such weapons?

I should be pleased to see another draft of the petition, if you prepare one.

Sincerely,

FK Givens for Dr. Pauling

Linus Pauling

HARVARD UNIVERSITY

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

16 Divinity Avenue
Cambridge, Massachusetts 02138

8 December 1975

Dr. Linus Pauling
Linus Pauling Institute of Science and Medicine
2700 Sand Hill Road
Menlo Park, CA 94025

Dear Linus,

I have taken so long to respond to your letter of 11 July that you may no longer have use for the enclosed materials. I don't think that my contribution to the recent progress in biological and chemical disarmament is much greater than that of a number of other individuals. Unfortunately, some of the hardest working of them may never be recognized because they are hidden in the middle levels of the government bureaucracy.

You may remember some good advice you gave me when I was a research student at Cal Tech. I had become quite involved in attempting to organize a conference on the health effects of fall-out. You told me to concentrate on scientific work, at least until I had done some worthwhile research. I took your advice and stayed mostly away from politics until 1963 when, through Paul Doty, I was asked to spend the summer as a full-time consultant to the Arms Control and Disarmament Agency in Washington. The multi-lateral nuclear force was then a subject of much debate and I was assigned to work on nuclear arms control. I soon realized that I could contribute nothing very effective in this area and asked to be assigned to study chemical and biological weapons. I read many government documents, most of them secret, and visited Fort Detrick and the CIA to find out what the U.S. was doing and what our government thought other countries were doing with chemical and biological weapons. I was startled to see how far the United States was moving in the biological weapons field when there was no valid national security interest in doing so. The military exploitation of our rapidly expanding knowledge of life processes could, in the long run, not only make war more terrible but might also bring about pernicious changes in man's view of the intrinsic value of human life. Of course, there were also more immediate reasons for urging changes in U.S. policy. Biological weapons are of no important military value to a nuclear power, yet their proliferation could greatly increase the power of other nations for threat and destruction. I shared an office at ACDA with the physicist Freeman Dyson, who gave me much encouragement. At the end of the summer I wrote up my analysis and conclusions in a classified document that probably never left the Agency. Parts of my report are reflected in a proposal that appears in the Proceedings of the Fourteenth Pugwash Conference, published in 1965, and in a book review published in the Bulletin of the Atomic Scientists in October 1964. At the time I was more con-

cerned with germ weapons than with chemical ones. I tried to attract the attention of a few higher level government officials and outside advisors to the unsoundness of U.S. policies. The individuals to whom I spoke were not unsympathetic but were too much preoccupied with problems of their own to take up an unfamiliar and seemingly not very urgent issue.

Although my discussions within the executive branch did not seem very effective, I was reluctant to go very far in public. Some of the technology of chemical and biological warfare being pioneered by the United States could easily be imitated by others. I was concerned that too much public attention to the subject might do more to provoke world-wide military interest in such weapons than to achieve their prohibition. But gradually I became convinced that no purely executive decision to curtail CBW programs was likely to have lasting effects, even if it could be achieved. It seemed that the lasting commitment of a treaty was required. Besides, the increasing use of "super tear gas" and herbicides in Vietnam and the large and conspicuous U.S. biological and chemical warfare programs made pointless any attempt to confine the arguments to official circles.

Since the ratification of treaties is generally impossible without strong public and congressional support, I began to try to stimulate broad awareness of the dangers of continued development of biological and chemical weapons and of the weakening of constraints against their use. My ultimate objective was to achieve U.S. ratification of the 1925 Geneva Protocol and to bring into existence new treaties to prohibit the production and possession of biological and chemical weapons. (As you know, many states consider the Protocol to prohibit only the first use of such weapons, not their use in reprisal.)

At about the same time I began the practice of seeking out and visiting individuals who might be able to exert a beneficial effect on policy, including publishers, journalists, and retired government officials, as well as active officials of the U.S. and other nations. In 1966, John Edsall and I, assisted by a biochemist, Milton Leitenberg, initiated a petition urging President Johnson to order a review of U.S. policies for biological and chemical weapons. It generated considerable coverage and favorable editorial comment in the press, first when it was released by its twenty-two initial sponsors in September 1966 and again when it was brought to the White House in February 1967 along with the signatures of more than 5,000 U.S. scientists.

Although at the time the scientists' petition did not bring about a high level review of U.S. policy or a halt in the

use of chemical weapons in Vietnam, it did increase public and official awareness of the issues and probably helped to set the stage for events that followed. In this regard it must be remembered that the Chemical Corps itself contributed much to public concern over biological and chemical weapons with a remarkable series of accidents and blunders. The implications of these events were particularly underscored by the writings and statements of the journalist Seymour Hersh and the Representative from New York Richard D. McCarthy.

After the scientists' petition was submitted, I continued to express my views both privately and in public talks and writings. Most of the latter are listed in the accompanying bibliography and copies are also enclosed. I also enclose a relevant chapter from a book by Joel Primack and Frank von Hippel. Some of the papers I wrote were directed at specific issues under consideration at the time. I circulated these papers privately to individuals in and out of the government and sought to arrange personal discussions of them where it seemed appropriate. Other papers and articles, written for a broader readership, were published in various newspapers, journals, and books.

In April 1969 I was invited to present an extended discussion of biological and chemical weapons in closed session to the Senate Committee on Foreign Relations. The published transcript is enclosed. After making the acquaintance of the Chairman and several other members of the Committee and its staff, I continued to consult with them, particularly in the course of hearings on the ratification of the Geneva Protocol in 1971 and 1974.

Another avenue of approach to the alteration of U.S. policy that seemed to hold promise was the holding of conferences to arouse interest among individuals who might be influential in foreign policy matters. Paul Doty and I organized such a conference at the American Academy of Arts and Sciences in Boston in July 1969 with support from the Salk Institute. Together with Herbert Scoville, Jr., I organized a later series of meetings at the Carnegie Endowment for International Peace. The Proceedings of the American Academy conference were circulated privately and the New York meetings led to a book published by the Carnegie Endowment in 1971. I also participated in numerous meetings and workshops dealing with biological disarmament sponsored by Pugwash and the Stockholm International Peace Research Institute and in a technical study of the possible effects of chemical and biological warfare published by the World Health Organization in October 1970. In the course of these trips, I arranged to speak with various officials abroad who might help to shape their countries' policies for biological and chemical disarmament.

In November 1969 and February 1970 President Nixon declared that the United States would renounce the development, possession and use of biological and toxin weapons and that the

1925 Geneva Protocol would be submitted to the Senate for its advice and consent to ratification. The President also announced U.S. support for the U.K. draft Convention prohibiting the development, production, possession, and transfer of biological weapons. I had no official role in the governmental review leading to these decisions. However, I was aware of the discussions taking place and I distributed several papers within the government addressed to some of the issues, particularly the ratification of the Geneva Protocol, the military use of tear gas, and the desirability of including toxins in the renunciation of biological weapons.

U.S. ratification of the Geneva Protocol, already delayed for forty-five years, was delayed for five more years because of dispute regarding the status of tear gas and chemical herbicides. Because of its massive use of these chemical weapons in Southeast Asia, the Administration argued that they did not come within the scope of the Protocol. The historical record, the views of the parties to the Protocol, and the weight of independent legal opinion were against the Administration view. This opposition was strongly stated by Secretary General U Thant and subsequently expressed by the General Assembly in a vote of eighty to three. Most of our closest allies abstained and only Portugal and Australia voted with the United States. I was convinced very early that the use of tear gas in war and even preparations for such use could lead to military acceptance and employment of more toxic chemicals. It took longer for me to see the full importance of prohibiting anti-plant warfare as well, although I was incensed by the use of herbicides to destroy food crops in Vietnam.

I learned much more about the use of herbicides in war than I ever expected by agreeing to conduct for the AAAS a limited study and field inspection of the effects of herbicides in Vietnam. Early in 1970 I invited the forester and biologist Arthur Westing to join me and after several months of study and preparation, we conducted an inspection in South Vietnam for six weeks in August and September 1970. We were accompanied by John Constable, a Boston surgeon familiar with medical conditions in Vietnam, and Robert Cooke, a Yale graduate student of plant ecology. On our return we wrote a preliminary report and a longer background document, which were presented at the annual AAAS meeting in Chicago in December. Several days earlier I had described our findings to officials at the White House and the State Department. At the start of the AAAS meeting, the White House announced that the use of herbicides in Vietnam would be subjected to "...an orderly, yet rapid phase-out..." Some of the photographs we took of sprayed forests and fields and an informal report of our observations appear in an article by Constable and me in the Sierra Club Bulletin for April 1971.

The Senate Foreign Relations Committee held its first series of hearings on ratification of the Geneva Protocol in March 1971. Although the use of herbicides in Vietnam had been essentially ended, the tear gas CS was still in combat use and the Administration sought to obtain Senate support for the view that tear gas and herbicides were not prohibited by the Protocol. I presented testimony to the effect that tear gas was of very little military value and that its use risked undermining the Protocol and stimulating world-wide interest and proliferation of other chemical weapons. I urged that Senate action be delayed in order to achieve an improvement in the Administration position. The Foreign Relations Committee decided to defer action and sent a letter to the President giving its reasons. The Administration has not yet changed its position on the interpretation of the Protocol. However, late last year President Ford directed that some compromise be found and as a result the Senate gave its consent and the United States became a party to the Protocol in April 1975. Under the compromise, the Senate did not explicitly agree with the Administration view of the Protocol but neither did it disagree. The two views are simply noted in the Report of the Foreign Relations Committee. For its part, the Administration agreed to renounce the use of tear gas and herbicides in all but a few limited and defined situations, including "rescue missions" and vegetation control on U.S. military bases. I argued against this compromise with Administration officials and Senators. Still, it is a decided improvement over the 1971 position and the United States is finally a party to the Protocol. We have also become party to the Biological Weapons Convention, making the Presidential decisions of 1969 into formal treaty commitments.

Aside from finally obtaining a uniform international interpretation of the Protocol, there is the task of creating a more far reaching treaty for chemical weapons, prohibiting their development, production, and possession. Although the U.S. and the U.S.S.R. have announced their intention to submit a joint initiative on chemical disarmament to the Conference of the Committee on Disarmament in Geneva, this has not occurred. I have tried to address the current situation in an article in Arms Control Today for April 1975.

Even a rather modest increase in public and congressional interest in chemical disarmament might overcome official indifference. Meanwhile, I think it is important to increase public awareness of the treaty commitments that governments have already undertaken. Even a treaty can be eroded if the people and their political leaders forget it. Therefore, aside from working for chemical disarmament, I would like to do what I can to bring about more general awareness of the Geneva Protocol and the Biological Weapons Convention. I want to find out if writers

of high school and college history texts can be interested in giving some space to these matters.

It was good to see Ava Helen and you last month. As I may have mentioned, I will be in the Bay Area on or about 10 February. Would that be a good time to visit you and see the Institute?

With warm regards,

Matt

Matthew Meselson

LINUS PAULING INSTITUTE of SCIENCE and MEDICINE
2700 Sand Hill Road, Menlo Park, California 94025
Telephone: (415) 854-0843

23 January 1979

Professor Matt Meselson
Biological Laboratories
Harvard University
16 Divinity Avenue
Cambridge, Massachusetts 02138

Dear Matt:

I continue to be interested in the work that you have been doing for world peace, especially with relation to the abolition of chemical and biological warfare throughout the world.

As you know, I have the material that you sent to me in 1976. I am now writing to ask if you could send me a statement about what sort of work that you have been doing in the field of world affairs since then. Please include your membership on committees, collaborative activities, lectures, work with governments, and all other pertinent information.

If you have pertinent publications or copies of statements by other people about what you have been doing, please send them to me.

Sincerely,

Linus

LP:dm

April 11, 1979

Dr. Linus Pauling
Linus Pauling Institute of Science and Medicine
2700 Sand Hill Road
Menlo Park, California 94025

Dear Linus:

Your letter of January 23 was forwarded to me here, where I am working in the laboratory of Ed Lewis until August. Please accept my apology for taking so long to answer. Since I last wrote to you, at the end of 1975, I have continued to work for chemical and biological disarmament, although less actively than before the Biological Weapons Convention came into force and the United States became a party to the Geneva Protocol earlier that year.

As you know, the Biological Weapons Convention prohibits the development, production and possession of biological and toxin weapons. It does not apply, however, to chemical weapons. The Geneva Protocol prohibits chemical warfare but is, in effect, a no-first-use agreement, not a disarmament treaty. Chemical weapons stockpiles are maintained by several of its parties, including the United States and the Soviet Union. The remaining step needed to achieve international legal prohibition of the entire spectrum of chemical and biological weapons is therefore the conclusion of a chemical disarmament treaty. This is where I have concentrated my efforts since 1975.

My principal activity in this period was the organization of a conference on Chemical Weapons and Chemical Arms Control, held in January 1977 at the American Academy of Arts and Sciences in Boston, and the editing of its proceedings for publication. I enclose a copy of the resulting book, published in April 1978 by the Carnegie Endowment for International Peace. Recent negotiations for chemical disarmament have been considerably more difficult and detailed than those which produced the Biological Weapons Convention. This reflects the greater importance assigned to chemical weapons by military planners, particularly in the NATO and the Warsaw Pact alliances. I therefore focused the deliberations of the conference on the problems and benefits of chemical disarmament in Europe, inviting government officials and advisors from the United States, Canada, England and West Germany. Although government policies are not decided at such conferences, they can be clarified and influenced. Considering the range of viewpoints represented and the diverse national and institutional backgrounds of the participants, we were particularly encouraged to find that by the end of the conference we were in broad agreement on the desirability of chemical disarmament and on a set of specific provisions which might form the core of a treaty. When the conference proceedings were published, copies were provided to members of Congress and to several

hundred government officials, advisors, journalists and others likely to be interested here and abroad. I took copies to a number of persons for further discussion and presented a seminar to a group of officials and journalists in Washington assembled by the Carnegie Endowment.

In March 1977, the National Academy held a forum on Research with Recombinant DNA at which I chaired a workshop on implications for biological arms control and disarmament. I did this in order to help dispel the mistaken and harmful notion that the Biological Weapons Convention fails to prohibit biological weapons arising from new techniques, such as those involving recombinant DNA. I invited representatives of the United States and Britain who could make this point with particular authority. A copy of the workshop report, prepared by James McCullough of the Library of Congress, is enclosed.

I continue to lecture on chemical and biological disarmament to local groups and in 1977 and 1978 as a Phi Beta Kappa Visiting Scholar I gave public lectures and held smaller group discussions on CB disarmament with students and faculty members at Hiram College in Ohio, Rockford College in Illinois, Williams College in Massachusetts, Walla Walla College in Washington, Pomona College in California and at Emory University and the University of Massachusetts.

Currently, Julian Perry Robinson of the University of Sussex and I are completing an article on Chemical Weapons and Chemical Disarmament for Scientific American, hoping to make clear the sound basis for chemical disarmament to a wide audience.

I enclose a number of items, listed on a separate sheet, which may be of use.

My wife, Sarah, and I are planning an automobile trip with our two daughters to visit our friends Frank and Mary Stahl in Eugene, Oregon. If you have time on June 5 or 6, I would like very much to stop by to see you on the return trip. I regret missing Peter here but I look forward to hearing news of Ava Helen and you from Linda.

Affectionately,

Matthew Meselson

MM:ek

Enclosures

Bibliography of Papers on Chemical and Biological Warfare

Curriculum Vitae

Research with Recombinant DNA, Report of Workshop No. 6, National Academy of Sciences, 1977

Chemical Weapons and Chemical Arms Control, ed. M. Meselson, Carnegie Endowment for International Peace, New York, 1978.

Citation accompanying honorary degree from Columbia University, June 1971.

Citation accompanying University of Chicago Alumni Award, June 1971.

Citation accompanying California Institute of Technology Distinguished Alumni Award, May 1975.

Citation accompanying Leo Szilard Award, April 1978.

Aside from the above and some items I sent in December 1975, the only other public statements about my activities I have are two additional citations that cannot be photocopied. They are:

"For unique and effective efforts to prevent biological and chemical warfare."

Public Service Award of the Federation of American Scientists, 1972.

"For outstanding contributions to science including its interactions with society."

Lehman Award of the New York Academy of Sciences, 1975.

Pauling

LINUS PAULING INSTITUTE of SCIENCE and MEDICINE
440 Page Mill Road, Palo Alto, California 94306
Telephone: (415) 327-4064

13 November 1983

Dr. Matt Meselson
Department of Biochemistry and Molecular Biology
Harvard University
7 Divinity Avenue
Cambridge, MA 02138

Dear Matt:

I had already read your letter in a recent copy of Science, and I am pleased to have the copy of the Chinese paper by Chang, Chen, Chou, and Lee. Are you planning to do something about making this paper known? Perhaps Science would be willing to publish it.

I have been in good shape, working very hard.

I have no idea whether or not Dr. Armand Hammer would be interested in supporting some of your further work on chemical arms control. I see him only about twice a year. I think that it would be all right for you to write to him, making your proposal - nobody can say how he would react to it. You could mention in your covering letter that I had recommended that you do so.

Sincerely,

Linus

LP:dm

Pauling

LINUS PAULING INSTITUTE of SCIENCE and MEDICINE
440 Page Mill Road, Palo Alto, California 94306
Telephone: (415) 327-4064

Dictated
30 October 1984

Dr. Matthew Meselson
Harvard University
Cambridge, MA

Dear Matt:

Tonight is the evening of 30 October 1984. I have just seen the fine program about yellow rain on public television. You were featured in it, and I am writing to congratulate you on the fine way in which you handled the problem.

Let me say again that I was very pleased with the talk that you gave at the symposium.

I trust that you will keep on with your campaign.

Sincerely,

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LP:dm

Would you send me an account of your activities during the last year or two, with documents?

Pauling

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Linus Pauling Jr

From: "Linus Pauling Jr" <lcpjr@aloha.net>
To: "Matthew Meselson" <msm@wjh.harvard.edu>
Cc: <karyle.butcher@orst.edu>
Sent: Thursday, November 06, 2003 3:03 PM
Attach: LP Award II Lttrhd.doc
Subject: Linus Pauling Award

Dear Professor Meselson,

I don't know that we have met. During the years that you were at Caltech, I seldom visited Pasadena; I was finishing my degree at Harvard Medical School, then in a residency in Honolulu, then setting up a practice in psychiatry there. My father spoke frequently of you, and my late brother Peter was a great admirer of yours.

I am writing to ask you to accept the Linus Pauling Award for Science, Peace or Health, to be conferred during or near the first week of May, 2004 at Oregon State University (OSU), Corvallis, Oregon. I originated the Award "established in the year 2001 in honor of Linus Pauling (1901-1994) and dedicated to recognition of outstanding achievement by an individual or organization in a subject of interest to Linus Pauling" with the help of a distinguished Select Advisory Committee (see attached).

The first Award was presented to Daisaku Ikeda, President of Soka Gakkai International (SGI), "for his indefatigable efforts on behalf of peace among the peoples and nations of the world and for the establishment of cultural and educational institutions to inform and educate people of all ages of the necessity for peace and the abolition of violence as a solution for conflict". SGI is providing most of the funding for the major exhibition 'Linus Pauling and the 20th Century' which has shown in 7 cities in the USA, 5 in Japan and, so far, 4 in Europe (including at UNESCO in Paris and the European UN headquarters building in Geneva). Perhaps you saw it at the Boston Science Museum in 2001.

The second Award was presented to Sir Joseph Rotblat, whom you probably know, "for groundbreaking research in nuclear medicine; for courageous efforts to educate the people of the world of the perils of nuclear war and the imperative need to achieve nuclear disarmament and to organize and stimulate the scientists of the world to recognize their responsibilities created by technological achievement and to assist in the development of mechanisms for reduction of nuclear threat and elimination of nuclear arms and war". Sir Joseph and my father were very much involved with the Pugwash Conferences on Science and World Affairs.

I was managing my father's institute in Palo Alto towards the end of his life and later arranged to have it taken over by OSU where it is doing extremely well under the leadership of Balz Frei. I also helped expand the holdings of the Linus and Ava Helen Pauling Papers of OSU's Valley Library Special Collections. Since I have reached a point in life where I can't do a proper job of mounting the Award, I have joined with Special Collections in the hope that the Award can be carried forward into the future while at the same time benefiting OSU.

This being the first presentation by OSU, the Award will be conferred in Corvallis. It is hoped that subsequent ceremonies will be in Portland. The

Award consists of a bronze medal, a certificate and a small cash prize, as well as covering transportation and housing costs. I believe that OSU will expect a short popular talk by you.

Please let me know as soon as possible if you will accept. It will definitely be a pleasure for me to meet you.

Sincerely.

Linus

LINUS PAULING AWARD
for
SCIENCE, PEACE or HEALTH

Linus Pauling Corvallis OR 3-4 May 2004

23 November 2003

Matthew S. Meselson, PhD
Thomas Dudley Cabot Professor of the Natural Sciences
Harvard University
7 Divinity Avenue
Cambridge MA 02138

Dear Professor Meselson,

I am absolutely delighted that you are able to accept the Linus Pauling Award on the 3rd and 4th of May, 2004 at Oregon State University, Corvallis Oregon. I am sure that my father and my brother Peter, were they able to attend, would be just as delighted. Actually, Peter, who was on the Award Advisory Board until his unfortunate death, nominated you a couple of years ago. I am happy that we are able to follow his recommendation.

The Award is now a function of the Special Collections of The Valley Library, Oregon State University. The contact person is

Clifford S. Mead, Head of Special Collections
121 The Valley Library
Oregon State University
Corvallis OR 97331-4501
Tel 541-737-2083
Fax 541-737-8674
Email cliff.mead@oregonstate.edu

Please feel free to contact Cliff or me if you have any questions. I am sure that Cliff will be in touch with you regarding details of travel and the Corvallis schedule.

I am looking forward to seeing you and Mrs. Meselson in May.

With all best wishes,

Most sincerely,

Linus Pauling Jr MD

3909 ROUND TOP DRIVE HONOLULU HAWAII 96822 USA
Tel 808-941-5887 Fax 808-945-0350 Email lcpjr@aloha.net

AVA HELEN
AND
LINUS PAULING
PAPERS

26 May 2004

Matt Meselson
Thomas Dudley Cabot Professor
of the Natural Sciences
Harvard University
Dept. of Molecular and Cellular Biology
7 Divinity Ave.
Cambridge, MA 02138

Dear Matt:

As Linus might say, I think it is fine that you were able to be with us earlier this month. Enclosed please find the Conant letter I promised you, as well as the videotape of the roundtable. Transcript to follow.

All best wishes,

Ceiff

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PHONE: 541-737-2075 · FAX: 541-737-1328 · EMAIL: SPECIAL.COLLECTIONS@ORST.EDU · HTTP://PAULING.LIBRARY.ORST.EDU/

HARVARD UNIVERSITY

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

16 Divinity Avenue
Cambridge, Massachusetts 02138

8 December 1975

Dr. Linus Pauling
Linus Pauling Institute of Science and Medicine
2700 Sand Hill Road
Menlo Park, CA 94025

Dear Linus,

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You may remember some good advice you gave me when I was a research student at Cal Tech. I had become quite involved in attempting to organize a conference on the health effects of fall-out. You told me to concentrate on scientific work, at least until I had done some worthwhile research. I took your advice and stayed mostly away from politics until 1963 when, through Paul Doty, I was asked to spend the summer as a full-time consultant to the Arms Control and Disarmament Agency in Washington. The multi-lateral nuclear force was then a subject of much debate and I was assigned to work on nuclear arms control. I soon realized that I could contribute nothing very effective in this area and asked to be assigned to study chemical and biological weapons. I read many government documents, most of them secret, and visited Fort Detrick and the CIA to find out what the U.S. was doing and what our government thought other countries were doing with chemical and biological weapons. I was startled to see how far the United States was moving in the biological weapons field when there was no valid national security interest in doing so. The military exploitation of our rapidly expanding knowledge of life processes could, in the long run, not only make war more terrible but might also bring about pernicious changes in man's view of the intrinsic value of human life. Of course, there were also more immediate reasons for urging changes in U.S. policy. Biological weapons are of no important military value to a nuclear power, yet their proliferation could greatly increase the power of other nations for threat and destruction. I shared an office at ACDA with the physicist Freeman Dyson, who gave me much encouragement. At the end of the summer I wrote up my analysis and conclusions in a classified document that probably never left the Agency. Parts of my report are reflected in a proposal that appears in the Proceedings of the Fourteenth Pugwash Conference, published in 1965, and in a book review published in the Bulletin of the Atomic Scientists in October 1964. At the time I was more con-

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Although my discussions within the executive branch did not seem very effective, I was reluctant to go very far in public. Some of the technology of chemical and biological warfare being pioneered by the United States could easily be imitated by others. I was concerned that too much public attention to the subject might do more to provoke world-wide military interest in such weapons than to achieve their prohibition. But gradually I became convinced that no purely executive decision to curtail CBW programs was likely to have lasting effects, even if it could be achieved. It seemed that the lasting commitment of a treaty was required. Besides, the increasing use of "super tear gas" and herbicides in Vietnam and the large and conspicuous U.S. biological and chemical warfare programs made pointless any attempt to confine the arguments to official circles.

Since the ratification of treaties is generally impossible without strong public and congressional support, I began to try to stimulate broad awareness of the dangers of continued development of biological and chemical weapons and of the weakening of constraints against their use. My ultimate objective was to achieve U.S. ratification of the 1925 Geneva Protocol and to bring into existence new treaties to prohibit the production and possession of biological and chemical weapons. (As you know, many states consider the Protocol to prohibit only the first use of such weapons, not their use in reprisal.)

At about the same time I began the practice of seeking out and visiting individuals who might be able to exert a beneficial effect on policy, including publishers, journalists, and retired government officials, as well as active officials of the U.S. and other nations. In 1966, John Edsall and I, assisted by a biochemist, Milton Leitenberg, initiated a petition urging President Johnson to order a review of U.S. policies for biological and chemical weapons. It generated considerable coverage and favorable editorial comment in the press, first when it was released by its twenty-two initial sponsors in September 1966 and again when it was brought to the White House in February 1967 along with the signatures of more than 5,000 U.S. scientists.

Although at the time the scientists' petition did not bring about a high level review of U.S. policy or a halt in the

use of chemical weapons in Vietnam, it did increase public and official awareness of the issues and probably helped to set the stage for events that followed. In this regard it must be remembered that the Chemical Corps itself contributed much to public concern over biological and chemical weapons with a remarkable series of accidents and blunders. The implications of these events were particularly underscored by the writings and statements of the journalist Seymour Hersh and the Representative from New York Richard D. McCarthy.

After the scientists' petition was submitted, I continued to express my views both privately and in public talks and writings. Most of the latter are listed in the accompanying bibliography and copies are also enclosed. I also enclose a relevant chapter from a book by Joel Primack and Frank von Hippel. Some of the papers I wrote were directed at specific issues under consideration at the time. I circulated these papers privately to individuals in and out of the government and sought to arrange personal discussions of them where it seemed appropriate. Other papers and articles, written for a broader readership, were published in various newspapers, journals, and books.

In April 1969 I was invited to present an extended discussion of biological and chemical weapons in closed session to the Senate Committee on Foreign Relations. The published transcript is enclosed. After making the acquaintance of the Chairman and several other members of the Committee and its staff, I continued to consult with them, particularly in the course of hearings on the ratification of the Geneva Protocol in 1971 and 1974.

Another avenue of approach to the alteration of U.S. policy that seemed to hold promise was the holding of conferences to arouse interest among individuals who might be influential in foreign policy matters. Paul Doty and I organized such a conference at the American Academy of Arts and Sciences in Boston in July 1969 with support from the Salk Institute. Together with Herbert Scoville, Jr., I organized a later series of meetings at the Carnegie Endowment for International Peace. The Proceedings of the American Academy conference were circulated privately and the New York meetings led to a book published by the Carnegie Endowment in 1971. I also participated in numerous meetings and workshops dealing with biological disarmament sponsored by Pugwash and the Stockholm International Peace Research Institute and in a technical study of the possible effects of chemical and biological warfare published by the World Health Organization in October 1970. In the course of these trips, I arranged to speak with various officials abroad who might help to shape their countries' policies for biological and chemical disarmament.

In November 1969 and February 1970 President Nixon declared that the United States would renounce the development, possession and use of biological and toxin weapons and that the

1925 Geneva Protocol would be submitted to the Senate for its advice and consent to ratification. The President also announced U.S. support for the U.K. draft Convention prohibiting the development, production, possession, and transfer of biological weapons. I had no official role in the governmental review leading to these decisions. However, I was aware of the discussions taking place and I distributed several papers within the government addressed to some of the issues, particularly the ratification of the Geneva Protocol, the military use of tear gas, and the desirability of including toxins in the renunciation of biological weapons.

U.S. ratification of the Geneva Protocol, already delayed for forty-five years, was delayed for five more years because of dispute regarding the status of tear gas and chemical herbicides. Because of its massive use of these chemical weapons in Southeast Asia, the Administration argued that they did not come within the scope of the Protocol. The historical record, the views of the parties to the Protocol, and the weight of independent legal opinion were against the Administration view. This opposition was strongly stated by Secretary General U Thant and subsequently expressed by the General Assembly in a vote of eighty to three. Most of our closest allies abstained and only Portugal and Australia voted with the United States. I was convinced very early that the use of tear gas in war and even preparations for such use could lead to military acceptance and employment of more toxic chemicals. It took longer for me to see the full importance of prohibiting anti-plant warfare as well, although I was incensed by the use of herbicides to destroy food crops in Vietnam.

I learned much more about the use of herbicides in war than I ever expected by agreeing to conduct for the AAAS a limited study and field inspection of the effects of herbicides in Vietnam. Early in 1970 I invited the forester and biologist Arthur Westing to join me and after several months of study and preparation, we conducted an inspection in South Vietnam for six weeks in August and September 1970. We were accompanied by John Constable, a Boston surgeon familiar with medical conditions in Vietnam, and Robert Cooke, a Yale graduate student of plant ecology. On our return we wrote a preliminary report and a longer background document, which were presented at the annual AAAS meeting in Chicago in December. Several days earlier I had described our findings to officials at the White House and the State Department. At the start of the AAAS meeting, the White House announced that the use of herbicides in Vietnam would be subjected to "...an orderly, yet rapid phase-out..." Some of the photographs we took of sprayed forests and fields and an informal report of our observations appear in an article by Constable and me in the Sierra Club Bulletin for April 1971.

The Senate Foreign Relations Committee held its first series of hearings on ratification of the Geneva Protocol in March 1971. Although the use of herbicides in Vietnam had been essentially ended, the tear gas CS was still in combat use and the Administration sought to obtain Senate support for the view that tear gas and herbicides were not prohibited by the Protocol. I presented testimony to the effect that tear gas was of very little military value and that its use risked undermining the Protocol and stimulating world-wide interest and proliferation of other chemical weapons. I urged that Senate action be delayed in order to achieve an improvement in the Administration position. The Foreign Relations Committee decided to defer action and sent a letter to the President giving its reasons. The Administration has not yet changed its position on the interpretation of the Protocol. However, late last year President Ford directed that some compromise be found and as a result the Senate gave its consent and the United States became a party to the Protocol in April 1975. Under the compromise, the Senate did not explicitly agree with the Administration view of the Protocol but neither did it disagree. The two views are simply noted in the Report of the Foreign Relations Committee. For its part, the Administration agreed to renounce the use of tear gas and herbicides in all but a few limited and defined situations, including "rescue missions" and vegetation control on U.S. military bases. I argued against this compromise with Administration officials and Senators. Still, it is a decided improvement over the 1971 position and the United States is finally a party to the Protocol. We have also become party to the Biological Weapons Convention, making the Presidential decisions of 1969 into formal treaty commitments.

Aside from finally obtaining a uniform international interpretation of the Protocol, there is the task of creating a more far reaching treaty for chemical weapons, prohibiting their development, production, and possession. Although the U.S. and the U.S.S.R. have announced their intention to submit a joint initiative on chemical disarmament to the Conference of the Committee on Disarmament in Geneva, this has not occurred. I have tried to address the current situation in an article in Arms Control Today for April 1975.

Even a rather modest increase in public and congressional interest in chemical disarmament might overcome official indifference. Meanwhile, I think it is important to increase public awareness of the treaty commitments that governments have already undertaken. Even a treaty can be eroded if the people and their political leaders forget it. Therefore, aside from working for chemical disarmament, I would like to do what I can to bring about more general awareness of the Geneva Protocol and the Biological Weapons Convention. I want to find out if writers

of high school and college history texts can be interested in giving some space to these matters.

It was good to see Ava Helen and you last month. As I may have mentioned, I will be in the Bay Area on or about 10 February. Would that be a good time to visit you and see the Institute?

With warm regards,

Matt

Matthew Meselson

April 11, 1979

Dr. Linus Pauling
Linus Pauling Institute of Science and Medicine
2700 Sand Hill Road
Menlo Park, California 94025

Dear Linus:

Your letter of January 23 was forwarded to me here, where I am working in the laboratory of Ed Lewis until August. Please accept my apology for taking so long to answer. Since I last wrote to you, at the end of 1975, I have continued to work for chemical and biological disarmament, although less actively than before the Biological Weapons Convention came into force and the United States became a party to the Geneva Protocol earlier that year.

As you know, the Biological Weapons Convention prohibits the development, production and possession of biological and toxin weapons. It does not apply, however, to chemical weapons. The Geneva Protocol prohibits chemical warfare but is, in effect, a no-first-use agreement, not a disarmament treaty. Chemical weapons stockpiles are maintained by several of its parties, including the United States and the Soviet Union. The remaining step needed to achieve international legal prohibition of the entire spectrum of chemical and biological weapons is therefore the conclusion of a chemical disarmament treaty. This is where I have concentrated my efforts since 1975.

My principal activity in this period was the organization of a conference on Chemical Weapons and Chemical Arms Control, held in January 1977 at the American Academy of Arts and Sciences in Boston, and the editing of its proceedings for publication. I enclose a copy of the resulting book, published in April 1978 by the Carnegie Endowment for International Peace. Recent negotiations for chemical disarmament have been considerably more difficult and detailed than those which produced the Biological Weapons Convention. This reflects the greater importance assigned to chemical weapons by military planners, particularly in the NATO and the Warsaw Pact alliances. I therefore focused the deliberations of the conference on the problems and benefits of chemical disarmament in Europe, inviting government officials and advisors from the United States, Canada, England and West Germany. Although government policies are not decided at such conferences, they can be clarified and influenced. Considering the range of viewpoints represented and the diverse national and institutional backgrounds of the participants, we were particularly encouraged to find that by the end of the conference we were in broad agreement on the desirability of chemical disarmament and on a set of specific provisions which might form the core of a treaty. When the conference proceedings were published, copies were provided to members of Congress and to several

hundred government officials, advisors, journalists and others likely to be interested here and abroad. I took copies to a number of persons for further discussion and presented a seminar to a group of officials and journalists in Washington assembled by the Carnegie Endowment.

In March 1977, the National Academy held a forum on Research with Recombinant DNA at which I chaired a workshop on implications for biological arms control and disarmament. I did this in order to help dispel the mistaken and harmful notion that the Biological Weapons Convention fails to prohibit biological weapons arising from new techniques, such as those involving recombinant DNA. I invited representatives of the United States and Britain who could make this point with particular authority. A copy of the workshop report, prepared by James McCullough of the Library of Congress, is enclosed.

I continue to lecture on chemical and biological disarmament to local groups and in 1977 and 1978 as a Phi Beta Kappa Visiting Scholar I gave public lectures and held smaller group discussions on CB disarmament with students and faculty members at Hiram College in Ohio, Rockford College in Illinois, Williams College in Massachusetts, Walla Walla College in Washington, Pomona College in California and at Emory University and the University of Massachusetts.

Currently, Julian Perry Robinson of the University of Sussex and I are completing an article on Chemical Weapons and Chemical Disarmament for Scientific American, hoping to make clear the sound basis for chemical disarmament to a wide audience.

I enclose a number of items, listed on a separate sheet, which may be of use.

My wife, Sarah, and I are planning an automobile trip with our two daughters to visit our friends Frank and Mary Stahl in Eugene, Oregon. If hou have time on June 5 or 6, I would like very much to stop by to see you on the return trip. I regret missing Peter here but I look forward to hearing news of Ava Helen and you from Linda.

Affectionately,

Matthew Meselson

MM:ek

Enclosures

Bibliography of Papers on Chemical and Biological Warfare

Curriculum Vitae

Research with Recombinant DNA, Report of Workshop No. 6, National Academy of Sciences, 1977.

Chemical Weapons and Chemical Arms Control, ed. M. Meselson, Carnegie Endowment for International Peace, New York, 1978.

Citation accompanying honorary degree from Columbia University, June 1971.

Citation accompanying University of Chicago Alumni Award, June 1971.

Citation accompanying California Institute of Technology Distinguished Alumni Award, May 1975.

Citation accompanying Leo Szilard Award, April 1976.

Aside from the above and some items I sent in December 1975, the only other public statements about my activities I have are two additional citations that cannot be photocopied. They are:

"For unique and effective efforts to prevent biological and chemical warfare."

Public Service Award of the Federation of American Scientists, 1972.

"For outstanding contributions to science including its interactions with society."

Lehman Award of the New York Academy of Sciences, 1975.