

INSTITUTE FOR DEFENSE ANALYSES

Research and Engineering Support Division



1825 Connecticut Avenue, N.W., Washington 9, D.C.

*Brown + Wright
have the same*

May 8, 1962

OSD1.941111.028

Dr. Harold Brown
Director of Defense Research and Engineering
Office of The Secretary of Defense
Room 3E1006 - The Pentagon
Washington 25, D.C.

Dear Dr. Brown:

Task 20 Panel was convened at your request to review the Department of Defense Medical and Biological Programs. Attached is a list of the Panel members and their principal affiliations (Appendix C).

To orient the Panel a series of testimonial briefings was held (Appendix D). In addition, project site visits were made to representative Service laboratories (Appendix E). The Panel then held executive sessions where the findings were discussed. From these sessions a series of interim recommendations evolved which is attached to this letter (Appendix B). A final report will be prepared for presentation to you approximately 1 July 1962.

In general, the biomedical research is divided into two categories: (1) a program which is oriented directly toward improvement of patient care, and (2) another which deals primarily with long-range protection of people from a variety of hostile environments. The former is usually called clinical research and deals with a variety of subjects such as shock, trauma, improved surgical techniques, and medical therapeutics. The latter is focused primarily on a variety of physiological studies of the adaptative mechanisms of the body to a variety of stimuli from thermal changes to noise. It can be stated parenthetically that in civilian laboratories the biochemical approach to both categories predominates today, as civilian interest is focused primarily on metabolic demands and requirements.

It was decided that any attempt to review the program in small package units would be almost overwhelming; thus a broad approach was taken and is presented in this interim letter report.

UBG-62-416

May 8, 1962



In this interim letter report the Panel has put a major emphasis on the needs of a program for meeting predicted military requirements and an organizational pattern most conducive to these needs.

With respect to atomic, bacteriological, and chemical warfare, efforts of a T-20 Subpanel were merged with the Ad Hoc Group for B&C Weapons & Defense by agreement with the Deputy Director for Research. This Subpanel is in full agreement with the Hanford Committee Report of 15 February 1962.

There are two areas specifically mentioned for review in the Task 20 assignment. These are (1) the outside contracts and grants programs, and (2) the question of overlap and duplication with other government agencies. Full-time staff for this work is required; however, in view of security problems, only one man is currently available to proceed with this work.

The Panel recognized that the most important objective of any research and development program of the military is future capability. This is especially true in the biomedical area since man is emerging as the most important unit of the future, not en masse and located according to the strategy of large numbers, but as specialized and expert units in a very complex pattern of coordinated activity. There is an obligation of the highest order for our military establishment to insure an active and farsighted program of research and development in the biomedical sciences so that man may be used most effectively.

An increasing responsibility of the Armed Forces medical services in the future will be to prepare medical corps and medical service officers for newly developing areas of the world. In these areas, malnutrition, acute infections, parasitic diseases, and other environmental factors are primary hazards. Much research is needed to develop the skills to combat these problems.

Respectfully submitted,


Herbert Pollack, M.D.

Attachments:

Appendices A,B,C,D,E

Distribution:

Dr. Eugene Fubini
Mr. Willis B. Foster
Col. John M. Talbot
Dr. John F. Kincaid
Dr. Richard Bissell
Mr. W.E. Bradley

Col. PUTNOY

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| ASSISTANT DIRECTOR (<i>Combat Systems</i>) | AD/CS | | |
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| OFFICE OF AERONAUTICS | OAR | | |
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| MATERIALS | MAT. | | |
| CHEMICAL TECHNOLOGY | CHEM. TECH. | | |
| OFFICE OF ATOMIC PROGRAMS | OAP | | |
| OSB AND R&E POLICY COUNCIL | OSB | | |
| SUSPENSE DATE | | | |

APPENDIX A

SUMMARY

I. Effective national defense demands a strong and comprehensive program in medicine and biology within the defense establishment.

Chemical, bacteriological, and nuclear weapons can inflict destructive effects never before encountered. Extremes of man-made environments associated with advanced weapons systems can subject men to severe new physiological stresses. The effects of extremes of climatological and disease environments in the remote areas of the world must be understood and dealt with if we are to maintain an effective mobile force. The success of future military operations may well depend on a broad appreciation of these problems and on the existence of an adequate military biomedical program.

II. Serious deficiencies exist in present military biomedical research and development establishments and programs.

There are relatively few leaders and scientists of great competence in the biomedical military establishment. The present organization of the military medical services makes the attraction and retention of such individuals difficult. This situation is aggravated by the Civil Service regulations.

The limited talent available is diffused among scattered laboratories. Many of these are substantially out of communication with each other. This lack of communication leads to duplication

of effort. More difficult to rationalize are the number of problems of obvious military importance which are not receiving adequate study.

III. The development and maintenance of an adequate military medical and biological competence requires broad recognition of the need and effective organization and leadership.

Interaction between those responsible for policies, plans, weapons development and operations in the Defense Department and Armed Services with those responsible for the biomedical programs is minimal at the present time.

There appears to be little understanding of, or enthusiasm for, the potential contributions of biology and medicine to the solution of military problems. Biology and medicine are not now represented in, nor have they direct access to, the higher levels of civilian or military planning or policy making. There are few if any individuals in a position to identify the overt or latent medical or biological problems inherent in present policy or plans and initiate action for their resolution. Such neglect seems archaic in a decade when medical and biological sciences are advancing at a faster pace than physics and when the success of worldwide military operations is crucially dependent on medical and biological factors.

The Office of the Director of Defense Research and Engineering has the responsibility for approving the biomedical

research and development programs. The actual operating personnel may be transferred out of the research and development laboratories without the knowledge of the Office of the Director Defense Research and Engineering. This interferes with continuity of programs.

APPENDIX B

INTERIM RECOMMENDATIONS

I. The Necessity for Biomedical Research in Military Laboratories

1. It was the strong conviction of the Panel that the Department of Defense give continued and expanded support to the performance of biomedical research under the control of the military establishment.

II. Relations between Research and Development and Operations

1. Serious attention should be given to increasing the contact between personnel in military operations and those with biomedical responsibilities and to establish clear channels of communication between them.

2. The Army Medical Service Combat Developments Group should be supported in its present activities toward improving the conduct of medical operations in the military field environment.

3. The Army Medical Service Combat Developments Group should be encouraged to expand the scope of its activities or other similar groups formed to examine long-range operational plans for the purpose of identifying the medical problems inherent in these plans.

4. The Air Force and Navy should establish units comparable in function to those in Paragraphs 2 and 3 above.

III. Analysis of Technical Programs

1. The following areas should be examined with the point of view of initiating or expanding research and development activity:

- (a) Fatigue
- (b) Diarrheal and Dysentery Diseases
- (c) Plans for Handling Mass Casualties
- (d) Shock and Trauma
- (e) Toxicity
- (f) Physical Fitness and Selection Standards
- (g) Preconditioning of Troops for Hostile Environments
- (h) Hepatitis
- (i) Dermatological Conditions
- (j) Neuropsychiatric Problems

2. The Walter Reed Army Institute of Research reactor should be dismantled because of duplication of existing facilities.

3. The current research activities at Fort Knox should be transferred to more appropriate laboratories.

4. In the field of protective clothing, an effort should be made to combine the duplicative efforts of the three Services.

IV. Personnel for Military Biomedical Research

1. The number of officers assigned to biomedical research and development activities should be based upon the actual research and development needs independent of troop strength.

2. The command control of biomedical research installations of the military services should be assigned to uniformed officers with primary military occupational specialties and with recognized competence in research.

3. The assignment of all personnel with a primary military occupational specialty in research should be with the consent and advice of the research and development command. There should be a promotion channel for research and development personnel based on accomplishment in this field.

4. Non-medical scientist officers with doctoral degrees should be given pay, recognition, and status comparable to medical officers of the same rank.

5. Every effort should be made to set up an active, aggressive recruitment and training program for medical and non-medical scientist officers in the research and development program.

6. Civilian scientists should be given recognition and status equivalent or comparable to uniformed personnel.

V. Organization and Administration of Biomedical Research and Development

1. The annual biomedical research and development budget should be apportioned throughout the year in a manner conducive to the best support of research.

2. To correct such duplication and inefficiency as now exist in the present biomedical research effort, full responsibility for all research in a given major area (e.g., infectious disease, trauma, radiation hazards, etc.) should be assigned to a single designated laboratory where possible or steps taken to vigorously coordinate the efforts of the several laboratories. Broad changes in program or

level of activity should require approval in the Office of The Secretary of Defense on behalf of the three Services.

3. Each of the Services should operate one installation with a broadly defined mission. If unified or contractor-operated laboratories are established this same principle should be applied. Only a laboratory with a broadly defined mission can respond rapidly to changing needs. Laboratories with broad missions, however, can be effective only if there is effective leadership.

4. It is recommended that arrangements for the management of crucial programs by outside agencies or universities be put into effect if the recommendation in Paragraph 2 cannot be carried out.

As a sequel to these specific recommendations, the Panel offers the following broad ones.

VI. Centralization of responsibility for both the health of military personnel and biomedical research and development, including budgets, should be carried out promptly. This consolidated function should be located within the Office of The Secretary of Defense and at a level which permits direct communication with those Assistant Secretaries of Defense involved in medical affairs, e.g., Manpower, Civil Defense, the Director of Defense Research and Engineering, and the Comptroller. Direct communication with the Assistant Secretaries for Research and Development of the three Services, and with the three Surgeons General is also obligatory.

VII. Provision and maintenance of appropriate liaison with the Joint Chiefs of Staff through the Joint Staff and with the individual Chiefs of Staff through the staffs of the individual Services.

VIII. Appointment of an interim Biomedical Advisory Board to include a civilian representative of each of the three Service Secretaries, a representative of the Joint Staff, one officer of some seniority drawn from each of the Services who has demonstrated his ability in relating some field of technology to military developments, and six or eight outstanding civilian biological, medical, social, and physical scientists. This Board would have the responsibility (calling on the Surgeons General or others as needed for information) for evaluating the present biomedical programs of the three Services, identifying the points in the planning and decision-making structures of the Departments and the Services where competence in identifying biomedical problems is needed, and for recommending an optimal organization of military research and development in the area of biology and medicine for all three Services.

IX. Establishment under the Office of The Secretary of Defense of one or more contractor-managed biomedical research facilities as a way of overcoming personnel and administrative difficulties implicit in the present pattern of operation.

APPENDIX C

TASK 20 - PANEL MEMBERS

Chairman: Dr. Herbert Pollack, IDA/RESD

Dr. Alfred Blumstein, IDA/RESD

Dr. Thomas H. Carroll, President
The George Washington University

Dr. Eugene P. Cronkite
Head, Division of Experimental Pathology
Medical Research Center
Brookhaven National Laboratory

Dr. Gustave J. Dammin
Department of Pathology, Harvard Medical School
Armed Forces Epidemiological Board

Dr. Frank Fremont-Smith
American Institute of Biological Sciences

Dr. Wendell H. Griffith
University of California School of Medicine

Dr. Philip Handler
Chairman, Department of Biochemistry
Duke University Medical Center

*Dr. James D. Hardy, Director
John Pierce Foundation, Yale University

Dr. Vincent J. Keenan, President
Philadelphia College of Pharmacy & Science

Dr. Earl W. Lindveit
Defense Systems Division
General Motors Corporation

Dr. C. N. H. Long
Sterling Professor of Physiology
Yale University School of Medicine

Dr. Richard P. Mason
Vice President for Research
The American Cancer Society, Inc.

*General James McCormack, USAF Ret.
Vice President
Massachusetts Institute of Technology

Mr. Henry C. Meadow
School of Medicine, Harvard University

Mr. Richard M. Paget
Cresap, McCormick & Paget
New York City

Dr. H. Wallace Sinaiko, IDA/RESO

Dr. Joseph E. Smadel
Chief, Laboratory of Virology and Rickettsiology
National Institutes of Health

Dr. H. Burr Steinbach
Professor of Zoology
University of Chicago

Dr. William S. Stone, Dean
University of Maryland School of Medicine

Dr. W. Barry Wood, Jr.
Department of Microbiology
The Johns Hopkins University School of Medicine

Dr. John B. Youmans, Director
Division of Scientific Activities
American Medical Association

* Did not participate in all Task Sessions or in
the preparation of the Interim Report

APPENDIX D

TASK 20 - BRIEFINGS

November 30, 1961

ARMY

Assistant Chief of Staff, Intelligence

Col. Ellsworth L. Miller

Office of the Surgeon General, Medical Research and Development
Command

Dr. Marion B. Sulzberger

Armed Forces Institute of Pathology

Lt. Col. Lloyd L. Neurauter
Dr. Robert E. Stowell
Capt. Roger H. Fuller, MC, USN
Col. Joe M. Blumberg, MC
Col. Frank M. Townsend, USAF, MC

AIR FORCE

Air Force Office of Scientific Research

Dr. Robert V. Brown
Dr. Knox T. Millsaps

Air Force Ass't. Chief of Staff, Intelligence

Martina A. McKay

Air Force Director of Research

Col. Donald C. Almy
Col. Jack Bollerud

Office of Aerospace Research

Maj. William J. Gannon
Lt. Col. Ronald M. Howard

November 30, 1961--continued

NAVY:

Naval Medical Research Institute

Cdr. David E. Goldman, USN

Office of Naval Research

Dr. Roger D. Reid

Office of Naval Intelligence

Cdr. G. M. Moore

Chief of Naval Operations

Capt. Vance E. Senter, MC
Mr. Carl A. Lejonhud

OFFICE OF THE SECRETARY OF DEFENSE:

Director of Defense Research and Engineering

Dr. Orr E. Reynolds
Col. John M. Talbot
Mr. David R. Schwarz
Dr. Virgil O. Johnson

OFFICE OF THE DEPUTY ASSISTANT SECRETARY OF DEFENSE:

Manpower-Health and Medical

Dr. Frank B. Berry, MD
Brig. Gen. Douglas B. Kendrick, Jr.
Col. Hayden W. Withers
Col. Henry S. Parker

DEFENSE ATOMIC SUPPORT AGENCY:

Capt. John A. O'Donoghue, USN
Col. Robert H. Holmes
Lt. Col. Max M. Nold

CENTRAL INTELLIGENCE AGENCY

Mr. Stephen L. Aldrich
Mr. William H. Fitzpatrick

November 30, 1961--continued

WHITE HOUSE

Dr. Jerome Wiesner - Special Assistant to the President
for Science and Technology

Dr. James B. Hartgering - President's Science Advisory Committee

TASK 20 - BRIEFINGS

December 1, 1961

ARMY:

Office of the Surgeon General of the Army

Dr. Marion B. Sulzberger
Col. James T. McGibony

Deputy Chief of Staff for Military Operations

Lt. Col. George W. Casey
M/Sgt. W. B. Stotler

Army Research Office/Office Chief of Research and Development

Col. Tyron E. Huber - Life Sciences Division
Col. F. J. Haase - Life Sciences Division
Col. Ralph W. Bunn - Life Sciences Division
Lt. Col. Charles W. Cook - Life Sciences Division
Maj. J. C. McWhorter, Jr. - Life Sciences Division
Dr. C. Lamanna - Life Sciences Division
Dr. Herbert L. Ley, Jr. - Life Sciences Division

Office Chief of Research and Development

Maj. S. K. McMurdo
Mr. J. P. Jordon - Manpower and Personnel Division
Mr. H. B. Buckley - Manpower and Personnel Division

Army Medical/Research and Development

Brig. Gen. James H. Forsee
Col. C. F. Vorder Bruegge
Lt. Col. R. R. Taylor
Col. Stanley J. Weidenkopf

Assistant Secretary of the Army (Research and Development)

Lt. Col. K. C. Emerson

December 1, 1961--continued

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Lt. Col. William J. Bausser
Col. Robert A. Weir

Air Force Systems Command

Brig. Gen. B. A. Strickland
Dr. Albert W. Heatherington
Col. Robert E. Murphy
Capt. William R. Yost

Surgeon General

Maj. Gen. R. L. Bohannon
Brig. Gen. R. T. Jenkins
Col. Karl H. Houghton
Brig. Gen. Larry A. Smith
Brig. Gen. Aubrey L. Jennings

Director of Personnel Planning

Lt. Col. William B. Crutchfield

Air Force Director of Research

Col. Jack Bollerud
Col. Donald C. Almy

Office of Scientific Research

Dr. Robert V. Brown

Office of Aerospace Research

Maj. William J. Gannon
Lt. Col. Ronald M. Howard

OFFICE OF THE SECRETARY OF DEFENSE:

Director of Defense Research and Engineering

Dr. Orr E. Reynolds
Col. John M. Talbot
Mr. David R. Schwarz

TASK 20 - BRIEFINGS

December 2, 1961

NAVY:

Naval Operations

Col. C. R. Baker, USMC
Lt. Cdr. Kenneth A. Murray
Capt. James W. Smith

Bureau of Medicine

Rear Adm. C. B. Galloway, MC
Rear Adm. E. C. Kenney, MC

Chief of Naval Operations

Mr. John J. Collins
Mr. Carl A. Lejonhud - Development

Office of Naval Intelligence

Cdr. G. M. Moore

ARMY:

Army Medical Research and Development

Brig. Gen. James H. Forsee, Surgeon General's Office

AIR FORCE:

Air Force Office of Scientific Research

Dr. Robert V. Brown

Office of Aerospace Research

Lt. Col. Ronald M. Howard

December 2, 1961--continued

WHITE HOUSE:

Dr. James B. Hartgering

OFFICE OF THE SECRETARY OF DEFENSE:

Director of Defense Research and Engineering

Col. John M. Talbot
Dr. Orr E. Reynolds
Mr. David R. Schwarz

TASK 20 - BRIEFINGS

January 4, 1962

NAVY:

Naval Medical Research Institute

Cdr. David E. Goldman

AIR FORCE:

Air Force Surgeon General

Col. Karl H. Houghton

Air Force Director of Research

Col. Donald C. Almy
Dr. Charles C. Limburg

Air Force Systems Command

Maj. Don C. LaMoine
Col. E. E. Myers
Col. G. J. Schriever
CWO Ray H. Sutton
Lt. Col. George Zinnemann

TASK 20 - BRIEFINGS

January 11, 1962

AIR FORCE:

Air Force Director of Research

Col. Donald C. Almy
Col. Jack Bollerud, Chief, Life Sciences, R&T

NAVY:

Naval Medical Research Institute

Cmdr. David E. Goldman, USN
Dr. H. T. Meryman

NASA:

Office of Grants, Research Contracts, NASA

Dr. John T. Holloway

ARMY:

Plans, Supply & Operations, Surgeon General's Office

Col. John H. Burman
Col. Andrew J. Colyer
Lt. Col. Louis H. Foubare
Maj. H. L. Hammond
Lt. Col. Charles F. McAleer, Jr.
Col. James T. McGibony
Lt. Col. Linden H. Schwab
Col. John H. Trenholm

January 11, 1962--continued

ARMY: - (Cont.)

Medical Research and Development Command

Maj. David N. Dalton
Brig. Gen. James H. Forsee
Col. Joseph D. Goldstein
Dr. Marion B. Sulzberger
Lt. Col. Richard R. Taylor
Col. Colin F. Vorder Bruegge
Col. S. J. Weidenkopf
Maj. Frederick M. Wells

Army Research Office

Col. F. J. Haase, Office of the Chief of Research and Development
Dr. Herbert L. Ley, Jr., Life Sciences

TASK 20 - BRIEFINGS

January 12, 1962

NAVY:

Naval Medical Research Institute

Omdr. David E. Goldman

Navy Bureau of Medicine and Surgery

Lt. Cmdr. L. E. Barclay

Rear Admiral C. B. Galloway

Cmdr. Robert Herrmann

Dr. Howard T. Karsner

Capt. J. R. Kingston

OFFICE OF THE SECRETARY OF DEFENSE:

Director of Defense Research and Engineering

Dr. Harold Brown, Director of Defense R&E

Col. John M. Talbot

Comptroller

Mr. Clifford S. Livermore

TASK 20 - BRIEFINGS

January 30, 1962

NAVY:

Naval Medical Research Institute

Cmdr. David E. Goldman

OFFICE OF THE SECRETARY OF DEFENSE:

Director of Defense Research and Engineering

Dr. Orr E. Reynolds

Office of Assistant Secretary of Defense (Civil Defense)

Mr. Walmer S. Strobe

AIR FORCE:

Air Force Director of Research

Col. Donald C. Almy

Air Force Systems Command

Lt. Col. George Zinnemann

BUREAU OF THE BUDGET:

Mr. Willis H. Shapley

ARMY:

Army Medical/Research and Development

Brig. Gen. James H. Forsee

Army Research Office/Office Chief of Research and Development

Lt. Col. Charles W. Cook - Life Sciences Division

TASK 20 - BRIEFINGS

January 31, 1962

ARMY:

Army Research Office/Office Chief of Research and Development

Lt. Col. Charles W. Cook - Life Sciences Division

Army Medical/Research and Development

Brig. Gen. James H. Forsee

INSTITUTE FOR DEFENSE ANALYSES:

Weapons Systems Evaluation Group

Mr. John Golden

NAVY:

Naval Medical Research Institute

Cmdr. David E. Goldman

OFFICE OF THE SECRETARY OF DEFENSE:

Director of Defense Research and Engineering

Dr. Orr E. Reynolds

AIR FORCE:

Air Force Systems Command

Lt. Col. George Zinnemann

Air Force Director of Research

Col. Donald C. Almy

Col. Jack Bollerud

Air Force Surgeon General

Col. Karl H. Houghton

APPENDIX E

TASK 20 - PROJECT SITE VISITS

| <u>Date</u> | <u>Name of Installation</u> |
|--------------|--|
| February 7-8 | Walter Reed Army Institute of Research Washington, D. C. |
| February 8-9 | Naval Medical Research Institute Armed Forces Radiobiology Research Institute Bethesda, Maryland |
| February 15 | Aerospace Medical Division, AFSC Brooks Air Force Base, Texas |
| February 16 | Brooke Army Medical Center Fort Sam Houston, Texas |
| February 17 | Aeromedical Field Laboratory, AFSC Holloman Air Force Base, New Mexico |
| February 18 | Naval Radiological Defense Laboratory San Francisco, California |
| February 26 | Army Special Forces Medical Training Activities Fort Bragg, North Carolina |
| February 27 | Naval Medical Field Research Laboratory Camp Lejeune, North Carolina |
| March 7 | Naval Medical Research Laboratory New London, Connecticut |
| March 8 | Chelsea Naval Hospital Chelsea, Massachusetts Protein Foundation Boston, Massachusetts |
| March 12-13 | U. S. Army Medical Research Laboratory Fort Knox, Kentucky |
| March 19-20 | U. S. Naval School of Aviation Medicine Pensacola, Florida |