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**Collection/Office of Origin:** Science and Technology Policy, Office of (OSTP)  
**Series:** Bromley, D. Allan, Files  
**Subseries:** Organization Files - NASA

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**OA/ID Number:** 62074  
**Folder ID Number:** 62074-001

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**Folder Title:**  
Life Sciences: NASA [1991]

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Stack:

Row:

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"CORRESPONDENCE TRACKING"

TYPE: INFORMATION DOCUMENT NUMBER: 9121707  
ORIGINATOR: 02 STATUS C DIRECTORATE STATUS  
\*\*\*\*\*

FROM: BIANCHI, C. Paul: JEFFERSON MEDICAL COLLEGE

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE: 06/03/91

SUBJECT: RE: THE LIFE SCIENCES PROGRAMS OF NASA AND THEIR  
IMPORTANCE TO OUR UNDERSTANDING OF HOW MAN CAN  
FUNCTION IN SPACE AND WHAT A REDUCTION IN  
APPROPRIATIONS WOULD MEAN.

\*\*\*\*\*  
DIRECTORATE STAFF  
ASSIGNED: ASSIGNED:

ACTION STAFF  
REQUIRED: ACTION:

\*\*\*\*\*  
SENDER'S DUE DATE:  
OSTP DUE DATE: STAFF DUE DATE  
DATE COMPLETED: DATE COMPLETED/DEPT:

\*\*\*\*\*  
COPIES TO: D. Allan Bromley  
LIFE SCIENCES  
PHYSICAL SCIENCES

\*\*\*\*\*  
WHITE HOUSE TRACKING #: CONTACT PERSON:  
REMARKS: PHONE: EXT:

OSTP RECEIVED: 06/10/91  
DEPT RECEIVED:

FILE: *Physical Sciences -*  
LIFE SCIENCE\*SPACE-SPACE STATI  
- NASA

P- LIFE SCIENCES - NASA \*  
PHYSICAL SCIENCES - Space

THE SCIENCE OF SPACE STATE





Thomas  
Jefferson  
University

Jefferson  
Medical  
College

Department of Pharmacology

9121707  
1020 Locust Street  
Philadelphia, PA 19107-6799  
(215) 955-7766  
Fax (215) 923-0758

RECEIVED

91 JUN 10 P 2:46

OFFICE OF THE  
DIRECTOR

June 3, 1991

Dr. D. Allan Bromley  
The White House  
Washington, D.C. 20500

Dear Dr. Bromley:

The Life Sciences Programs of NASA are of major importance to our understanding of how man can function in space. Space is one of the frontiers that we must explore so that the challenges of the future can be met. A reduction in appropriations for fiscal year 1992 will seriously hamper research in this area. NASA has made many contributions to our economic development and should be encouraged to continue with its research programs.

Sincerely,

*C. Paul Bianchi*

C. Paul Bianchi, Ph.D.  
Professor of Pharmacology

CPB:ec

cc: Vice President Quayle  
Dr. D. Alan Bromley  
Admiral Richard Truly  
Lawrence R. Young

"CORRESPONDENCE TRACKING"

TYPE: INFORMATION

DOCUMENT NUMBER: 9121530

\*\*\*\*\*

FROM: CHAMBERS, Charles M.: AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

TO: DR. BROMLEY

DATE OF  
CORRESPONDENCE: 05/24/91

SUBJECT: CONCERN ABOUT THE PROPOSED CUTBACKS IN FUNDING FOR  
THE SPACE STATION FREEDOM.

\*\*\*\*\*

ASSIGNED TO:

ACTION REQUIRED:

\*\*\*\*\*

SENDER'S DUE DATE:

OSTP DUE DATE:

DATE COMPLETED:

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COPIES TO: D. Allan Bromley  
LIFE SCIENCES  
Sarah Keegan  
PHYSICAL SCIENCES

\*\*\*\*\*

WHITE HOUSE TRACKING #:

CONTACT PERSON:

REMARKS:

DATE RECEIVED: 05/28/91

FILE: LIFE SCIENCES\*SPACE

-NASA

*Physical Sciences*  
P- Physical Science - Space \*  
Life Science - NASA







9121530

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

Charles M. Chambers  
Executive Director

May 24, 1991

RECEIVED  
91 MAY 28 P12:36  
OFFICE OF THE  
DIRECTOR

Dr. D. Allan Bromley  
Assistant to the President for  
Science and Technology  
Old Executive Office Building, Suite 360  
17th Street and Pennsylvania Avenue NW  
Washington, DC 20506

Dear Dr. Bromley:

The American Institute of Biological Sciences (AIBS), a federation of 45 professional societies and research laboratories representing over 80,000 professional biologists, is concerned about proposed cutbacks in funding for the Space Station Freedom.

AIBS strongly supports the space station. We believe that the potential advances in basic science research justify financial support for the station. All living organisms are composed of complex biological systems which have evolved in the presence of gravity. The space station will allow these systems to be studied under the effects of microgravity, a vital step for long-term human exploration of space.

Enclosed is a copy of our statement regarding the Space Station Freedom to the Senate Commerce Subcommittee on Science, Technology and Space submitted earlier this year. It was offered as a constructive assesment of a project we hope will have maximum utility and effectiveness. If our comments are useful to your deliberation, we would be pleased to elaborate on them.

Sincerely,

Charles M. Chambers

Enclosure



WRITTEN STATEMENT OF  
THE AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES  
  
FOR  
  
THE SENATE COMMERCE, SCIENCE, AND TRANSPORTATION  
  
SUBCOMMITTEE ON SCIENCE, TECHNOLOGY AND SPACE  
  
REGARDING THE REDESIGN OF THE SPACE STATION FREEDOM

APRIL 16, 1991

The American Institute of Biological Sciences (AIBS) appreciates the opportunity to comment on the redesigned Space Station Freedom (SSF) as it relates to meeting the basic research requirements of the life sciences. AIBS, a federation of 45 scientific societies and research laboratories representing over 80,000 professional biologists, is dedicated to "the advancement of the biological sciences and their application to human welfare."

AIBS agrees with the assessment of the Augustine Committee that the most significant feature of the space station involves research to determine how human physiology functions in space, a significant factor for future exploration of the solar system. Uncertainties regarding the feasibility of long duration human spaceflight, such as the effect of solar flares or the impact of galactic cosmic radiation, must be determined before more complex exploration of our solar system may proceed. Basic biological systems of plants and animals are altered in microgravity producing a vast array of responses. All living organisms are composed of complex systems, each of which has evolved in the presence of gravity. Under the effects of microgravity, many of these systems function in an altered manner. Studying human physiology and other basic biological processes in microgravity and obtaining the needed life sciences information for long duration human spaceflight missions is the primary goal of the space station. As the Augustine report concluded, "[T]he Space Station is a critical next step if the U.S. is to have a manned space program in the future."

NASA's decision to include a variable-speed centrifuge in its redesigned space station plan is critical for life sciences research. The centrifuge will allow controlled studies on whether factors other than weightlessness, such as radiation or the mix of gases in the spacecraft cabin, contribute to negative side-effects experienced in space by astronauts. The centrifuge will also allow exposure to fractional g-forces for varying



periods of time thereby facilitating the study of both short-term and long-term effects of microgravity on biological systems.

AIBS also shares some of the concerns expressed by the Space Science Board regarding the centrifuge. Since the centrifuge will not be available for use on the station until after the year 2000, life science research will be delayed until that time. In the interim, we would like to see the Spacelab Life Sciences (SLS) Space Shuttle missions continue their research. AIBS is concerned that the present schedule for the SLS flights allows for a five-year gap between the last SLS flight and the fully operational space station. Not only will needed research be forgone, but the lull may discourage young scientists from the space biology program. Dedicated spacelab missions provide a critical capability for conducting research needing only short periods of time, leaving those experiments requiring long periods of time to the station.

Although AIBS agrees with the Space Science Board that the design of the centrifuge is vague, we do support the redesign so long as the centrifuge is capable of supporting a wide variety of species and may run continuously for several months. We are also concerned with the sharing of limited power among various laboratory modules. We trust that there will be sufficient power to conduct the long-term biological experiments which are the top priority for the station.

AIBS is also concerned with the potential to allocate funds from other science research projects, especially in light of funding limitations imposed on discretionary spending by the Budget Enforcement Act of 1990. We are concerned that the centrifuge and other necessary equipment are not contained within the present funding plan. We trust that NASA's budget will be allocated to meet its life science needs while retaining other science research projects.

"CORRESPONDENCE TRACKING"

TYPE: INFORMATION

DOCUMENT NUMBER: 9121523

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FROM: SAMUELS, William M.: THE AMERICAN PHYSIOLOGICAL SOCIETY

TO: DR. BROMLEY

DATE OF  
CORRESPONDENCE: 05/23/91

SUBJECT: A LETTER WHICH WAS MAILED TO EVERY MEMBER OF THE  
HOUSE APPROPRIATIONS COMMITTEE REGARDING THE  
DELETIONS OF FUNDS FOR SPACE STATION FREEDOM AND THE  
REDUCTION OF RESEARCH FUNDS FOR THE LIFE SCIENCES.

\*\*\*\*\*

ASSIGNED TO:

ACTION REQUIRED:

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SENDER'S DUE DATE:

OSTP DUE DATE:

DATE COMPLETED:

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COPIES TO: D. Allan Bromley  
LIFE SCIENCES  
Sarah Keegan  
Carl Bretscher

\*\*\*\*\*

WHITE HOUSE TRACKING #:

CONTACT PERSON:

REMARKS:

DATE RECEIVED: 05/28/91

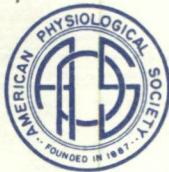
FILE: LIFE SCIENCES\*SPACE

- NASA

P- Physical Science - Space \*  
Life Science - NASA

SECRET





# The American Physiological Society

9121523  
9650 ROCKVILLE PIKE • BETHESDA, MARYLAND 20814-3991  
301-530-7164 • FAX 301-571-1814

91 MAY 28 PM 12:35

Please Reply To:

OFFICE OF THE  
DIRECTOR

May 23, 1991

D. Alan Bromley  
Office of Science & Technology Policy  
The White House  
1600 Pennsylvania Avenue NW  
Washington, DC 20500

Dear Dr. Bromley:

The American Physiological Society is concerned by the action of the House Appropriations Subcommittee on VA, HUD, and Independent Agencies in deleting funds for Space Station Freedom and reducing research funds for the Life Sciences Division of the National Aeronautics and Space Administration.

The attached letter, which I am sending to you for your information, was mailed to every member of the House Appropriations Committee.

Sincerely,

*William M. Samuels*  
William M. Samuels  
Public Affairs

Attch:

---

**President**  
Norman C. Staub  
University of California, San Francisco

**Past President**  
Shu Chien  
University of California, San Diego

**President-Elect**  
Stanley G. Schultz  
University of Texas, Houston

**Executive Director**  
Martin Frank

Helen J. Cooke  
Ohio State University, Columbus

**Councillors**  
Brian R. Duling  
University of Virginia, Charlottesville

L. Gabriel Navar  
Tulane University, New Orleans

Allen W. Cowley, Jr.  
Medical College of Wisconsin, Milwaukee

John E. Hall  
University of Mississippi, Jackson

David J. Ramsay  
University of California, San Francisco



# The American Physiological Society

9650 ROCKVILLE PIKE • BETHESDA, MARYLAND 20814-3991  
301-530-7164 • FAX 301-571-1814

May 22, 1991

Please Reply To:

Rep. Jamie Whitten, Chairman  
House Appropriations Committee  
US House of Representatives  
Washington, DC 20515

Dear Mr. Whitten:

The American Physiological Society urges the House Appropriations Committee to restore the \$2 billion budgeted for Fiscal Year 1992 for the funding of the National Aeronautics and Space Administration's Space Station Freedom and to fully fund the \$184 million budgeted for the Life Sciences Division.

The nation's stated goals of colonizing the moon and sending manned space flights to Mars within the next 25 years is dependent upon a space life sciences research program designed to ensure the health of crew members in extended periods of zero gravity, to protect them from long term radiation exposure, to develop reliable life support and medical care systems, and to predict human behavior in isolation. A prime focus is the change in human physiology in space, such as loss of body fluids, motion sickness, bone demineralization, muscle atrophy, and cardiovascular deconditioning.

The Society is dismayed by the action of the House Appropriations Subcommittee on VA, HUD, and Independent Agencies in deleting the funds for the Space Station Freedom program and distressed that funding was not provided for continuing the life sciences research needed to assure both the environmental and physical health of crew members in long term flights. The delay in this research not only sets back the nation's goals in space, but it also blunts technological and biological advances that benefit mankind.

Knowledge gained from earlier space biomedical research already has had an impact on medical care and practice, especially in the areas of the mechanisms underlying bone loss, muscle strength, cell metabolism, cancer induction, vestibular disorders, regulation of heart function and blood pressure, and tissue healing responses.

President  
Norman C. Staub  
University of California, San Francisco

Past President  
Shu Chien  
University of California, San Diego

President-Elect  
Stanley G. Schultz  
University of Texas, Houston

Executive Director  
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Allen W. Cowley, Jr.  
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John E. Hall  
University of Mississippi, Jackson

David J. Ramsay  
University of California, San Francisco



Rep. Jamie Whitten

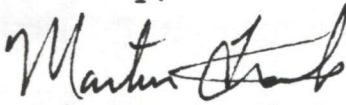
May 22, 1991

Page 2

Space Station Freedom and its space biomedical laboratory provide unique capabilities for the exploration of a spectrum of gravity dependent variables that would have direct biomedical and biotechnological applications for the medical treatment of a variety of diseases and disorders.

The American Physiological Society, the nation's oldest biomedical science society with a membership of 7,000, urges the Committee restore the \$2 billion budgeted for Space Station Freedom and to fully fund the \$184 million budgeted for the Life Sciences Division.

Sincerely,

A handwritten signature in dark ink, appearing to read "Martin Frank", with a stylized flourish at the end.

Martin Frank, Ph.D.  
Executive Director