To: Denise Baisden, MD
Smith Johnston, MD
Michael Barratt, MD
Executive Committee Members of the Space Medicine Branch
of the Aerospace Medical Association
fx (281) 483-3392

From: Philip Scarpa, MD
Space Medicine Branch
fx (407) 867-2679

July 31, 1998

5 pages including cover

Enclosed is the reply by Arnauld Nicogossian to our Position Letter that AsMA sent to Dan Goldin for us in June. I also enclosed the original letter that was sent to Dan Goldin.

Phil

Aerospace Medical Association

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June 22, 1998

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Executive Director
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RUSSELL B. RAYMAN, M.D., M.P.H.
Association Home Office

Mr. Daniel S. Goldin
NASA HQS
300 E. Street, SW
Washington, DC 20546

Dear Mr. Goldin:

The Aerospace Medical Association is extremely proud of the success of Neurolab. Scientific areas of emphasis included the balance system, orientation of individuals in their environment, nervous system control of the cardiovascular system, sleep and circadian rhythms, and developmental neurobiology. Research in all of these areas will benefit spaceflight crewmembers and millions of people on Earth. Important data were obtained from the crew and from several species of animal subjects. The scientists are now obtaining data on readaptation of the nervous system to Earth's environment, and they will be spending the next year analyzing their data and preparing to publish their results for the benefit of the scientific community, the NASA community, and the general population.

It is very important to continue this neuroscience research as well as research related to the loss of bone and muscle, nutrition and metabolism, pharmacology, and other disciplines important in space life sciences. To do so will require adequate facilities and active investigations on the International Space Station (ISS) to study the effects of long-duration exposure to the microgravity environment on these same systems and to do important long-term developmental biology studies.

However, it appears that these ISS facilities, especially those for animal research, will not be available for years. The Aerospace Medical Association feels it is imperative that NASA's life sciences program have continual access to flight opportunities in the time between Neurolab and the operational phase of the ISS. Consequently, we urge you to provide the life sciences community adequate access to flight until full research facilities will be available on the ISS.

Sincerely,

Russell B. Rayman M.D.

Russell B. Rayman, M.D.
Executive Director

National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001

Reply to Attn of: U

JUL 21 1998

Russell B. Rayman, M.D.
Executive Director
Aerospace Medical Association
320 South Henry Street
Alexandria, VA 22314-3579

Dear Dr. Rayman:

Thank you for your letter to NASA's Administrator, Mr. Daniel S. Goldin, urging that NASA provide the life sciences community adequate access to flight during the construction of the International Space Station (ISS). Your concern that areas of space life science research such as neuroscience, musculoskeletal physiology, nutrition and metabolism, pharmacology, cardiovascular physiology, sleep and circadian rhythms, and other disciplines which are important for crew health and which are potentially limiting if humans are to explore the universe is well taken. Moreover, you are correct that in the near future, it will be near impossible to use non-human mammalian species in space flight research to determine invasively the cause, effects, and prevention of space flight maladaption syndromes.

Planning is underway to allow early and significant life sciences research while the ISS is being assembled. The Human Research Facility will be sent to orbit on the 6A Shuttle launch scheduled for December 1999. Additionally, a countermeasure research program is being planned from the earliest phases of construction of the ISS. Other areas of research planned during this period will be related to the EVA opportunities, microbiology, environmental health, circadian rhythm/performance, as well as evaluation of the long-term effects of spaceflight before and after flights. Research studies will rely heavily on crew participation as subjects.

NASA is also studying the possibility of introducing a number of "Gap" filler missions to enhance space flight access and therefore increase the potential for more fundamental biological research studies as well as testing laboratory hardware for the ISS.

A large part of our research program will continue to be in supporting ground-based studies for developing new technology and using appropriate microgravity simulations in both fundamental biology and for the perfection of treatments as preventatives, countermeasures, or rehabilitation to protect the health of astronauts. I am also committed to maintaining and enlarging the investigation base that is needed to support life sciences research on the Station. This will entail increasing the number of peer reviewed research grants over the next several years, and I have promised the NASA Administrator that research investigations will increase by 9 percent in the next fiscal year.

One year ago, NASA established the National Space Biomedical Institute with the charter to develop countermeasures for exploration. Considerable headway has already been made which was recently highlighted at their first biannual workshop and retreat held June 8-11, 1998, in Houston.

Your continued interest as a spokesperson for the Aerospace Medical Association and your efforts to disseminate the scientific and technical information between NASA and the knowledgeable and interested community are appreciated.

Best personal regards.

Sincerely,

Arnauld E. Nicogossian
Associate Administrator for
Life and Microgravity Sciences and Applications

cc:
U/Ms. McCormick
UL/Dr. Vernikos
Dr. Sulzman
Dr. Schneider
UO/Ms. Angotti
UP/Ms. Havens