

## Proposal for Forming an IAA Study Group S 2.2

**Title of Study:**

**Artificial Gravity as a Tool in Biology & Medicine**

**Proposer:**

**Laurence R. Young, Sc.D.**

**Primary IAA Commission Preference: Commission II: Life Sciences**

*(From Commission 1 to Commission 6)*

**Secondary IAA Commission Interests:**

*(From Commission 1 to Commission 6)*

**Members of Study Team**

**Chairs: Larry Young and Kazuyoshi Yajima**

**Secretary: William Paloski**

**Other Members:**

G. Clement

S. Glasauer

K. Iwasaki

A. LeBlanc

J. Vernikos

R. Gerzer

H. Hecht

I. Kozlovskaya

J. McPhee

F. Vil-Villiams

**Short Description of Scope of Study**

**Overall Goal: To assess the state of current knowledge concerning the requirements and effectiveness of Artificial Gravity.**

**Intermediate Goals: To plan for a transition from ground studies of AG to flight investigations with animals and humans; to propose presentations at scientific conferences; to hold study group meetings at these conferences; to draft the position paper.**

**Methodology:** Work with the scientific leadership of the current international AG/Bed Rest Project and with the National space agencies to lay the groundwork for space flight AG studies. Both the planned ISS centrifuge and a possible new human flight AG facility are to be considered. Periodic meetings will be held in conjunction with the IAA and the Humans in Space symposia and the activity will be carried out through frequent telecom and e-mail communications in addition.

**Time Line:** Initial coordination during 2004 – leading to a first Study meeting in Vancouver, October. 2004. Subsequent study meetings annually, to 2007.

**Final Product (Report, Publication, etc.):** Preparation of a set of recommendations for AG flight research, reflecting the results of the AG/Bed Rest studies and other research, for presentation at the 2007 IAA meeting. Preparation of a final report and submission of a manuscript containing the methodology and recommendations.

**Target Community:** The human exploration scientific community, to assist in planning of long duration missions; the Gravitational Biology scientific community; and the National space agencies, for guidance concerning future space centrifuge facilities for animals and humans.

**Support Needed:** Space on program at IAA-sponsored scientific conferences; meeting room at such IAA conferences; travel funds to meetings and conferences are the responsibility of the individual travelers; optional final presentation of position paper issues and recommendations at special meeting, if the support of space agencies for the meeting can be obtained.

**Potential Sponsors:** IAA; space agencies, particularly NASA, ESA, CSA, RSA, and NASDA.

*To be returned to IAA Secretariat Paris fax: 33 1 47 23 82 16 email: sgeneral@iaa.net.org*

**Date:** 8/25/03

**Signature:** Laurence R. Young, Sc.D.

*For IAA Use Only:*

**Approved, October 30, 2003  
Dr. K. Kasturirangan, SAC VP**