



NSBRI Explorer

National Space Biomedical Research Institute • July 2004

Success Stories: NSBRI Deliverables

Bone Loss: Jay Shapiro, M.D., (Kennedy Krieger Institute), demonstrated the effectiveness of zoledronate in decreasing bone loss in spinal cord injury patients over a one-year period, relative to subjects not given the drug. Subjects received one, 15-minute IV infusion. Shapiro is developing a Supplemental Medical Objective with NASA Flight Surgeons and others to look at the possibility of using zoledronate or similar drugs to minimize bone loss in space. He also is collaborating with NASA scientists and proposing further evaluation and validation of the drug as a countermeasure through a joint Countermeasure Evaluation and Validation Project/NSBRI Working Group.

Enabling Technology: Richard Potember, Ph.D., (Johns Hopkins/Applied Physics Lab), has delivered a mini time-of-flight mass spectrometer designed to use blood, urine or breath samples for in-flight scientific studies, medical monitoring and evaluation. Potember is working with NSBRI, NASA Fundamental Space Biology and Space Medicine to look at potential advancement of this technology toward flight. On ISS, it could significantly aid performance of a wide range of scientific and medical laboratory assessments and could be tested for medical monitoring ability. For exploration missions, this device could potentially be used to support ongoing clinical health evaluations throughout a mission. ♦

Sutton Presents to NASA BPRAC

Jeffrey Sutton, M.D., Ph.D., NSBRI Director, provided an Institute Status Report to the NASA Biological and Physical Research Advisory Committee (BPRAC) on May 20. The briefing described scientific and management achievements and plans for future growth in alignment with the Vision for Space Exploration. He highlighted NSBRI's success at engaging multiple universities to work on focused product lines, developing product pipelines, and monitoring projects and accomplishments to add value to NASA's Bioastronautics Program. ♦

Space Radiation Liaison Named

Marcelo Vazquez, M.D., Ph.D., NSBRI Investigator and Scientist in the Medical Department of Brookhaven National Laboratory (BNL), has been appointed to a new position, NSBRI/NASA Space Radiation Liaison. Since radiation risk to astronaut health is a key concern, this position will ensure NSBRI's radiation-related projects work cooperatively with NASA's cross-cutting efforts in radiation. As liaison, Vazquez will facilitate communication between NSBRI and the NASA Space Radiation Laboratory at BNL, advise the NSBRI Director, and engage the Institute's External Advisory Council and the radiation community to ensure the NSBRI's unique resources and expertise are optimized. ([News Release](#)) ♦

Research and Education Opportunities

Two current requests for proposals provide the opportunity to participate in NSBRI's research and education programs. [NSBRI-RFP-04-02](#) solicits Education and Public Outreach projects targeting levels K-16 and Phase I proposals for development of a Graduate Education Program in space life sciences. Proposals are due July 28.

A solicitation with NASA, [NH04ZUU003N](#), requests proposals in three areas: Individual Biomedical Model Systems Investigator Research, Individual Biomedical Research and Countermeasures Investigator Research, and NSBRI Team Research. Proposals are due Sept. 8.

Applications for NSBRI's Postdoctoral Fellowship Program were due on June 30. NSBRI's first Fellows will be funded in the fall. ♦

Calendar Update

External Advisory Council Meeting:

Sept. 22-23, Houston,
EAC members and Team Leadership attend.

Board of Directors Meeting: Oct. 7, Houston.

NASA Bioastronautics Investigators' Meeting:

Jan. 10-12, 2005; Galveston, Texas,
NSBRI Investigators attend. ♦

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