Astrobiology 2010

Evolution and Life: Surviving Catastrophes and Extremes on Earth and Beyond

April 26-29, 2010 • League City, Texas

Program

Lunar and Planetary Institute
9:15 a.m. Grinspoon D. H. *

Astrobiology Research, Outreach and Education from Commercial Reusable Suborbital Spacecraft [#5626]

Commercial human spaceflight will soon be a reality. In this presentation I will review opportunities for astrobiology research and education from suborbital flights.

9:30 a.m. Lewis A. Johnson P. Jejelewol O. A. Sodipe A. Shishodia S.

The Prospective Function of Curcumin Against the Negative Effects of Microgravity [#5488]

Microgravity has several deleterious effects on cells. These cells may exhibit an up-regulation or down-regulation of their gene expression. We are investigating the effects of the phytochemical curcumin on microgravity-induced deleterious effects.

9:45 a.m. Cumbers J. * Rothchild L.

BISRU: Synthetic Microbes for Moon, Mars and Beyond [#5672]

Synthetic biology and genomics will bring a new range of designer organisms into being and give us new tools for the manipulation and control of these organisms. BISRU or biological in situ resource utilization is the use of such genetically modified organisms in space.

10:00 a.m. BREAK

DIVERSITY IN ASTROBIOLOGY RESEARCH AND EDUCATION

Monday, 8:00 a.m. Crystal Salon C

This session shares a diverse group of researchers' astrobiology experiences and explores topics such as institutional support, student interest, and models for sustaining or expanding opportunities for diversity in the field.

Chairs: Leigh Arino de la Rubia

Todd Gary

8:00 a.m. Cavosie A. J. *

‘Impact’ of the NAIR-MIRS Program on Astrobiology Research at a Minority Institution: Connecting Univ. of Puerto Rico to South Africa to Univ. of Wisconsin to NASA [#5422]

This abstract describes the outcome of the research and student-related activities at the University of Puerto Rico that resulted from the NAI-MIRS award I received in 2009.

8:15 a.m. Melchiorre E. B. * Lopez A. Velasquez C. M.

Stable Isotope Astrobiology at Hispanic Serving Institutions: Si Se Puede! [#5366]

A “crawl-walk-run” strategy has been used to create a strong, sustainable program in stable isotope geochemistry with an emphasis on astrobiology. The result was the creation of a vibrant program addressing the record of early life on Earth.

8:30 a.m. Misra P. * Garcia R. Mahaffy P. R.


An organic contaminant database and library has been developed for use with the Sample Analysis at Mars (SAM) instrumentation utilizing laboratory-based Gas Chromatography-Mass Spectrometry measurements of pyrolyzed and baked material samples.

8:45 a.m. Mendez A. *

Studying Planetary Habitability After a NASA Astrobiology Institute MIRS Sabbatical [#5606]

The NASA Astrobiology Institute Minority Institution Research Support (NAI-MIRS) opened an opportunity for professors and students to study planetary habitability at the University of Puerto Rico.