Monday, April 26, 2010
POSTER SESSION: RESULTS FROM ASTEP AND OTHER ASTROBIOLOGY FIELD CAMPAIGNS
6:00 p.m.  Marina Plaza Ballroom

Pavilion Lake Research Project: Understanding the Conditions for Microbialite Growth and Development in Pavilion Lake, Canada [#5497]
The Pavilion Lake Research Project has been working to understand microbialite morphogenesis in Pavilion Lake and the potential for biosignature preservation in these carbonate rocks. We present a synopsis of the PLRP’s research findings to date.

Tavormina P. L.  Ussler W.  Joye S. M.  Scholin C.  Orphan V. J.
Real-Time Molecular Assays for the Detection of Aerobic Methanotrophs in the Deep Ocean [#5285]
The distribution of planktonic aerobic methane oxidizers in the water column is poorly understood. We describe development of methods for in situ enumeration of marine methanotrophs for integration with the Deep Environmental Sample Processor.

Cardace D.  Hoehler T. M.
Subsurface Investigation of the Coast Range Ophiolite, Northern California: Field Campaign Findings [#5564]
Our subsurface survey of the actively serpentinizing Coast Range Ophiolite, N. California, documents its mineralogy and aqueous geochemistry and provides qPCR results indicating that this subsurface habitat hosts microbial life.

Employing Autonomous Underwater Vehicles to Develop New Techniques for Astrobiological Exploration: Recent Field Results and Future Opportunities [#5534]
We report two recent expeditions funded by NASA’s Astrobiology Science and Technology for Exploring Planets (ASTEP) program that demonstrate how advances in telemetry and autonomy can advance investigation astrobiological exploration methodologies.

Rask J. C.  Schwert D.  Lepper K.  De Leon P.  McKay C. P.
Exploring the Microbiology Inside Relict Eskers [#5655]
We report on the 2009 NASA Spaceward Bound North Dakota expedition to the Dahlen and Breker Eskers, and discuss drilling and sampling operations as well as the results of biological analysis of soils retrieved from inside the eskers.

Treiman A. H.  Robinson K. L.  Blake D. F.  Bish D.
Mineralogy Determinations by CheMin XRD, Tested on Ultramafic Rocks (Mantle Xenoliths) [#5351]
A ‘CheMin’ XRD instrument was tested on ultramafic rocks, from Spitsbergen NO (AMASE/ASTEP expedition). The ‘CheMin’ system detected all minerals present (>1.5% vol.), and yielded mineral abundances close to those from petrographic analyses.